Commonwealth of Kentucky
Environmental and Public Protection Cabinet
Department for Environmental Protection
Division for Air Quality
803 Schenkel Lane
Frankfort, Kentucky 40601
(502) 573-3382

Draft

AIR QUALITY PERMIT

Issued under 401 KAR 52:020

Permittee Name:	**North American Stainless**
Mailing Address:	**6870 Highway 42** **Ghent, KY 41045**
Source Name:	**Same as above**
Mailing Address:	**Same as above**
Source Location:	**9404 Highway 2096** **Henderson, KY 42419**
Permit Number:	**V-03-037 (Revision 2)**
Source A. I. #:	**711**
Activity #:	**APE20050004**
Review Type:	**Title V/Operating/PSD**
Source ID #:	**21-041-00034**
Regional Office:	**Florence Reginal Office** **8020 Veteran Memorial Drive, Suite 110** **Florence, KY 41042** **(859) 525-4923**
County:	**Carroll**
Application Complete Date:	**September 9, 2003 (Original)** **June 27, 2005 (Revision 1)** **March 20, 2006 (Revision 2)**
Issuance Date:	**December 1, 2003 (Original)**
Revision Date:	**August 8, 2005 (Revision 1)**
Expiration Date:	**December 1, 2008**

John S. Lyons, Director
Division for Air Quality

Revised 12/09/02

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Rev #	Permit type	Log # APE#	Complete Date	Issuance Date	Summary of Action
----	**Initial Issuance**	**55756**	**9/9/03**	**12/1/03**	**Initial Issuance**
1	**Major Revision**	**_**	**6/27/05**	**8/8/05**	**Major Revision, Details in SOB**
2	**Major Revision**	**APE200 50004**	**3/20/06**		**Major Revision, Details in SOB**

SECTION A - PERMIT AUTHORIZATION

Pursuant to a duly submitted application the Kentucky Division for Air Quality hereby authorizes the operation of the equipment described herein in accordance with the terms and conditions of this permit. This permit has been issued under the provisions of Kentucky Revised Statutes Chapter 224 and regulations promulgated pursuant thereto.

The permittee shall not construct, reconstruct, or modify any affected facilities without first having submitted a complete application and received a permit for the planned activity from the permitting authority, except as provided in this permit or in 401 KAR 52:020, Title V Permits.

Issuance of this permit does not relieve the permittee from the responsibility of obtaining any other permits, licenses, or approvals required by this Cabinet or any other federal, state, or local agency.

SECTION B - EMISSION POINTS, AFFECTED FACILITIES, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS

06 (S-06) - Flat Products Annealing Furnace #1
Description:
An annealing furnace with a maximum processing rate of 100 tons of steel input per hour and a maximum natural gas usage rate of 70 MMBtu/hr.
Construction commenced - March 1992.

APPLICABLE REGULATIONS:
401 KAR 51:017- Prevention of significant deterioration.
401 KAR 59:010 – New process operations.

1. Operating Limitations:
None.

2. Emission Limitations:
a) Visible emissions shall not equal or exceed 20 percent opacity [401 KAR 59:010, Section 3(2)]
b) Total particulate emissions: See Section D.
c) Total nitrogen oxide emissions: See Section D.
d) Total VOC emissions: See Section D.
e) Total carbon monoxide emissions: See Section D.

Compliance Demonstration Method:
To provide reasonable assurance that the emission limitations are being met as described in Section D, the permittee shall monitor monthly natural gas usage rates, and monthly hours of operation.

The particulate emissions rate shall be calculated as follows:

Particulate Emission Rate = (tons/month)	Monthly natural gas consumption rate (mmscf/month) x 1000 (mmBTU/mmscf) x Controlled PM emission factor* (lbs/mmBTU)/2000 (lbs/ton).
Particulate Emission Rate = (lbs/hr)	Monthly natural gas consumption rate (mmscf/month) x 1000 (mmBTU/mmscf) x Controlled PM emission factor* (lbs/mmBTU) / (monthly hours of operation)

*The Controlled PM emission factor shall be 0.0076 lbs/mmBTU of heat input. This emission factor shall be replaced by the number calculated from an emission test or other modification, and must be approved by the Division. Records of any such change in the emission factor used shall be maintained at the source.

SECTION B - EMISSION POINTS, AFFECTED FACILITIES, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS (CONTINUED)

The Nitrogen Oxide emission rate for this emission point shall be calculated as follows:

Nitrogen Oxide Emission Rate (tons/month) = Monthly gas consumption rate (mmscf/month) x 1000 (MMBtu/mmscf) x Controlled Nitrogen Oxide Emission Factor (lbs/MMBtu)/2000 (lbs/ton)

Nitrogen Oxide Emission Rate (lb/hr) = Monthly gas consumption rate (mmscf/month) x 1000 (MMBtu/mmscf) x Controlled Nitrogen Oxide Emission Factor* (lbs/MMBtu)/(monthly hours of operation)

*The controlled nitrogen oxide emission factor used shall be 0.06 lb/MMBtu of heat input. This emission factor shall be replaced by the number calculated whenever an emissions test or other modification, approved by the Division, is carried out for this emission point. Records of any such change in the emission factor used shall be maintained at the source.

The VOC emissions rate shall be calculated as follows:
VOC Emission Rate (tons/month) = Monthly natural gas consumption rate (mmscf/month) x 1000 (mmBTU/mmscf) x Controlled VOC emission factor*(lbs/mmBTU)/2000 (lbs/ton)

VOC Emission Rate (lbs/hr) = Monthly natural gas consumption rate (mmscf/month) x 1000 (mmBTU/mmscf) x Controlled VOC emission factor* (lbs/mmBTU) / (monthly hours of operation)

*The Controlled VOC emission factor shall be 0.0055 lbs/mmBTU of heat input. This emission factor shall be replaced by the number calculated from an emission test or other modification, and must be approved by the Division. Records of any such change in the emission factor used shall be maintained at the source.

The Carbon Monoxide emissions rate shall be calculated as follows:
CO Emission Rate (tons/month) = Monthly natural gas consumption rate (mmscf/month) x 1000 (mmBTU/mmscf) x Controlled CO emission factor* (lbs/mmBTU)/2000 (lbs/ton)

CO Emission Rate (lbs/hr) = Monthly natural gas consumption rate (mmscf/month) x 1000 (mmBTU/mmscf) x Controlled CO emission factor* (lbs/mmBTU) / (monthly hours of operation)

*The Controlled CO emission factor shall be 0.084 lbs/mmBTU of heat input. This emission factor shall be replaced by the number calculated from an emission test or other modification, and must be approved by the Division. Records of any such change in the emission factor used shall be maintained at the source.

Compliance with annual limits shall be calculated as a rolling twelve month total. The rolling 12 month total shall be calculated at the beginning of each month for the previous twelve months.

SECTION B - EMISSION POINTS, AFFECTED FACILITIES, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS (CONTINUED)

3. Testing Requirements:

The permittee shall test for PM, CO, VOC and NOx within sixty (60) days after achieving the maximum production rate at which the affected facilities will be operated but not later than 180 days after modification of the source, the permittee shall conduct a performance demonstration on the affected facilities in accordance with 401 KAR 50:055, General compliance requirements. These performance tests must also be conducted in accordance with General Provisions G(d)7 of this permit.

4. Specific Monitoring Requirements:

a. The permittee shall perform monthly visual inspections where:
   i. If no visible emissions are observed then no further monitoring is required.
   ii. If visible emissions are observed, the permittee shall perform a Method 9 reading.

b. The permittee shall monitor the hours of operation (per month, and 12 month rolling total), monthly natural gas usage rate, and the calculated nitrogen oxide, VOC, CO and PM/PM10 emissions.

5. Specific Record Keeping Requirements:

The permittee shall keep records of the monthly qualitative visible emission observations and Method 9 opacity readings, the monthly natural gas usage, the calculated NOx, VOC, CO and PM/PM10 emission rates, and the hours of operation (per month, and 12 month rolling total).

6. Specific Reporting Requirements:

Any exceedance in the emissions rates or visible emissions standard as specified in this permit shall be reported to the Division as soon as possible per General Condition F 8 of this permit.

SECTION B - EMISSION POINTS, AFFECTED FACILITIES, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS (CONTINUED)

03 (S-03) and 07 (S-07) – Flat Products Mixed Acid Pickling #1 and #2:
Description:
Acid pickling of steel sheets using nitric and hydrofluoric acids with a maximum processing capacity of 200 tons of steel input per hour (100 tons/ hour each AP line) and using a chemical scrubber for control of nitrogen oxides, nitric acid, and hydrofluoric acid.
Construction commenced - January 1991, Modified – December 2005

APPLICABLE REGULATIONS:

401 KAR 51:017 Prevention of significant deterioration of air quality.

1. Operating Limitations:
None

2. Emission Limitations:

a. Nitrogen oxide emissions shall not exceed 50 ppm, 4.60 lb/hr.
Nitrogen oxide emissions shall not exceed 20.14 tons per 12 month rolling total.

The following formulas will be used in calculating the NO_x emissions:
NO_x emissions rate (tons/day) = Average NO_2 concentration in exit stream (ppm by volume) x 1.1945E-7 (lbs/cu. ft./ppm by volume) x 1,147,800 (cu. ft./hr) x hours of operation (hrs/day) x 0.0005 (tons/lb)

Monthly NO_x emissions rate (tons/month) = Daily NO_x emissions rate (tons/day) x days of operation per month (days/month)

The NO_2 concentration is the daily average concentration measured in the exit gas stream as per the monitoring requirements listed below.

3. Testing Requirements:
NOx monitor shall be calibrated, operated, and maintained according to manufacturer's recommendations.

4. Specific Monitoring Requirements:
The concentration of NO_2 in the exit stream of the scrubber, as recorded by the analyzer, shall be monitored hourly.

If the NOx monitor becomes nonoperational, additional process monitoring of the control device will be required. The temperature of the reaction chamber and ammonia flow will be recorded on an hourly basis until the hourly NOx monitoring is resumed.

SECTION B - EMISSION POINTS, AFFECTED FACILITIES, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS (CONTINUED)

5. Specific Record Keeping Requirements:

Records of the hourly and monthly calculated NO_x emissions rates shall be maintained at the source. Records of the start and end times of operation of the pickling operation and the associated scrubber shall be maintained.

6. Specific Reporting Requirements:

Reports of any exceedance of the emission limitations listed above shall be submitted to the Division as soon as possible per General Condition F8 of this permit.

7. Specific Control Equipment Operating Conditions:

a. The scrubber shall be operated at all times that the pickling unit is in operation.

b. The permittee shall monitor and record the following Scrubber operating parameters at least once per shift:
   1. Flow rate of the scrubbing liquor
   2. Temperature of reaction chamber

SECTION B - EMISSION POINTS, AFFECTED FACILITIES, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS (CONTINUED)

04 (S-04) - Coil Polishing:
Description:
An Acme coil grinder with a maximum capacity of 125 tons of steel per hour having a mist collector to control particulate emissions with an efficiency of 99%.
Construction commenced - November 1991.

APPLICABLE REGULATIONS:
401 KAR 59:010 - New process operations.

1. Operating Limitations:
None.

2. Emission Limitations:
Particulate emissions shall not exceed 30 tons per 12 month rolling period. – Self imposed to preclude 401 KAR 51:017 – Prevention of Significant Deterioration.
Visible emissions shall not equal or exceed 20% opacity.

The particulate emissions rate shall be calculated as follows:
Particulate Emission Rate (tons/month) = Steel processing rate (in tons of steel processed/month) x Controlled Particulate Emission Factor (in lbs/ton of steel processed) / 2000 (lbs/ton)
The controlled particulate emission factor used shall be 0.2571 lbs/ton steel processed. This emission factor shall be replaced by the number calculated whenever an emissions test or other modification, approved by the Division, is carried out for this emission point.

3. Testing Requirements:
If the weekly observations of the visible emissions from this emission point are found to be in excess of the limits prescribed above on more than two occasions in any three month period, a stack test shall be conducted to determine the emission factor used to calculate compliance with the allowable particulate emissions rate, as listed in this permit, within three months of the last exceedance. The owner or operator shall notify the Division of the performance test at least 30 days prior to the proposed test date and shall obtain approval from the Division for the procedures that will be used to determine compliance. Method 5 shall be used to determine the particulate emissions.

4. Specific Monitoring Requirements:
A qualitative observation of the visible emissions from this emission point shall be performed once a week, when the unit is in operation. The observer shall determine if the emission point had normal visible emissions. Further, a quarterly Method 9 reading by a certified visible emissions observer shall also be performed, simultaneous with the qualitative observation, to quantify the visible emissions. In addition, on any day that the qualitative reading shows visible emissions to be above normal, a Method 9 reading shall be performed. The calculated particulate emissions and steel processing rates shall be monitored to ensure compliance with the emission limits listed above.

SECTION B - EMISSION POINTS, AFFECTED FACILITIES, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS (CONTINUED)

5. Specific Record Keeping Requirements:

Records shall be maintained of the weekly and quarterly opacity measurements as required by this permit. Records shall also be maintained of the last two opacity measurements that are in excess of the emission limits specified in this permit, including the date and time of the exceedance.

Records of the calculated particulate emissions rate, steel processing rate, and hours of operation of this unit shall be maintained at the source. In addition, a record of the control equipment inspection shall be maintained at the source indicating the date of each inspection and if the mist collector is in proper working condition.

6. Specific Reporting Requirements:

Any exceedance in the particulate emissions rate or visible emissions standard specified in this permit shall be reported to the Division as soon as possible per General Condition F 8 of this permit. In addition, the owner or operator shall certify, annually, whether the opacity measurements were conducted continuously or intermittently, and if intermittent, the frequency of such measurements.

7. Specific Control Equipment Operating Conditions:

The mist collector used as the control equipment shall be inspected to ensure its proper operation. Inspection of the mist collector shall consist of a weekly check of the visible emissions, to confirm that the emissions are normal, as well as a quarterly visual inspection of the impingement plates to determine that they are in proper working condition. The mist eliminator shall be operated at all times that the polishing unit is in operation.

SECTION B - EMISSION POINTS, AFFECTED FACILITIES, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS (CONTINUED)

05 (S-05) - Z-Mill #1 - Cold Rolling Mill:
Description:
Sedzimer Cluster Mill with a maximum production rate of 100 tons of steel coil per hour using 17.5 gallons of rolling oil and having a deflector filter, with a control efficiency of 95%, used to control particulate oil emissions.
Construction commenced - October 1991.

11 (S-21) - Z-Mill #2 - Cold Rolling Mill:
Description:
Sedzimer Cluster Mill with a maximum processing capacity of 100 tons of steel coil per hour using 17.5 gallons of rolling oil per hour and having a deflector filter, with a control efficiency of 95%, to control particulate oil emissions.
Construction commenced - January, 1995.

APPLICABLE REGULATIONS:
401 KAR 59:010 - New process operations.
401 KAR 51:017- Prevention of significant deterioration.

1. Operating Limitations:
None.

2. Emission Limitations:
Particulate emissions shall not exceed 25 tons per 12 month rolling total
VOC emissions shall not exceed 100 tons per 12 month rolling total
Visible emissions shall not equal or exceed 20% opacity.

The particulate and VOC emission rates shall be calculated as follows:
Particulate Emission Rate = Rolling Oil makeup (gallons/month) x Controlled Particulate
(tons/month) Emission Factor (lbs/gallons of rolling oil)/ 2000 (lbs/ton)

The controlled steel particulate emissions factor used shall be 0.325 lbs/gallon of rolling oil makeup rate (oil added minus loss associated with DE system, oil removal from tank, and other quantifiable losses).

VOC Emission Rate = Rolling oil makeup rate (gallons/month) x VOC Emission Factor
(tons/month) (lbs/gallon of rolling oil used) / 2000 (lbs/ton)

The VOC emission factor used shall be 1.3 lbs/gallon of rolling oil make up rate (oil added minus loss associated with DE system, oil removal from tank, and other quantifiable losses). These emission factors shall be replaced by the numbers calculated whenever an emissions test or other modification, approved by the Division, is carried out for this emission point.

3. Testing Requirements:
If the weekly observations of the visible emissions from this emission point are found to be in excess of the limits prescribed above on more than two occasions in any three month

SECTION B - EMISSION POINTS, AFFECTED FACILITIES, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS (CONTINUED)

period, a stack test shall be conducted to determine the emission factor used to calculate compliance with the allowable particulate emissions rate, as listed in this permit, within three months of the last exceedance. The owner or operator shall notify the Division of the performance test at least 30 days prior to the proposed test date and shall obtain approval from the Division for the procedures that will be used to determine compliance. Method 5 shall be used to determine the particulate emissions.

4. Specific Monitoring Requirements:

A qualitative observation of the visible emissions from this emission point shall be performed once a week, when the unit is in operation. The observer shall determine if the emission point had normal visible emissions. Further, a quarterly Method 9 reading by a certified visible emissions observer shall also be performed, simultaneous with the qualitative observation, to quantify the visible emissions. In addition, on any day that the qualitative reading shows visible emissions to be above normal, a Method 9 reading shall be performed.

The calculated particulate and VOC emissions and rolling oil usage rates (oil added minus loss from DE system, oil tank removal, and other quantifiable losses) shall be monitored to ensure compliance with the emission limits listed above.

5. Specific Record Keeping Requirements:

Records shall be maintained of the weekly and quarterly opacity measurements as required by this permit. Records shall also be maintained of the last two opacity measurements that are in excess of the emission limits specified in this permit, including the date and time of the exceedance.

Records of the calculated particulate and VOC emission rates, rolling oil makeup rate (minus loss from DE system, oil removal from tank, and other quantifiable losses) and hours of operation of this unit shall be maintained at the source. In addition, a record of the visual inspection of the air pollution controls shall be maintained at the source indicating the date of each inspection and whether it is in proper working condition.

6. Specific Reporting Requirements:

Any exceedance in the particulate emissions rate or visible emissions standard specified in this permit shall be reported to the Division as soon as possible per General Condition F 8 of this permit. In addition, the owner or operator shall certify, annually, whether the opacity measurements were conducted continuously or intermittently, and if intermittent, the frequency of such measurements.

7. Specific Control Equipment Operating Conditions:

The deflector filter used as the control equipment shall be inspected to ensure its proper operation. Inspection of the deflector filter shall consist of a weekly check of the visible emissions, to confirm that the emissions are normal, as well as a quarterly visual inspection of the filters to determine whether they are in proper working condition. The filter shall be operated at all times that the rolling mill is in operation.

8. Alternative Operating Scenario: See Section H.

SECTION B - EMISSION POINTS, AFFECTED FACILITIES, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS (CONTINUED)

01 (S-01) – Flat Products Annealing Furnace #2:
Description:
An annealing furnace with a maximum processing rate of 100 tons of steel input per hour and a maximum natural gas usage rate of 85 MMBtu/hr.
Construction commenced - March 1992.

APPLICABLE REGULATIONS:
401 KAR 59:010 – New process operations.
401 KAR 51:017 – Prevention of significant deterioration.

1. Operating Limitations:
None.

2. Emission Limitations:
a) Visible emissions shall not equal or exceed 20 percent opacity [401 KAR 59:010, Section 3(2)]
b) Total particulate emissions: See Section D.
c) Total nitrogen oxide emissions: See Section D.
d) Total VOC emissions: See Section D.
e) Total carbon monoxide emissions: See Section D.

Compliance Demonstration Method:
To provide reasonable assurance that the emission limitations are being met as described in Section D, the permittee shall monitor monthly natural gas usage rate, and monthly hours of operation.

The particulate emissions rate shall be calculated as follows:
Particulate Emission Rate (tons/month) = Monthly natural gas consumption rate (mmscf/month) x 1000 (mmBTU/mmscf) x Controlled PM emission factor* (lbs/mmBTU)/2000 (lbs/ton)

Particulate Emission Rate (lbs/hr) = Monthly natural gas consumption rate (mmscf/month) x 1000 mmBTU/mmscf x Controlled PM emission factor* (lbs/mmBTU) / (monthly hours of operation)

*The Controlled PM emission factor shall be 0.0076 lbs/mmBTU of heat input. This emission factor shall be replaced by the number calculated from an emission test or other modification, and must be approved by the Division. Records of any such change in the emission factor used shall be maintained at the source.

SECTION B - EMISSION POINTS, AFFECTED FACILITIES, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS (CONTINUED)

The Nitrogen Oxide emission rate for this emission point shall be calculated as follows:

Nitrogen Oxide Emission Rate (tons/month) = Monthly gas consumption rate (mmscf/month) x 1000 (MMBtu/mmscf) x Controlled Nitrogen Oxide Emission Factor* (lbs/MMBtu)/2000 (lbs/ton)

Nitrogen Oxide Emission Rate (lb/hr) = Monthly gas consumption rate (mmscf/month) x 1000 (MMBtu/mmscf) x Controlled Nitrogen Oxide Emission Factor* (lbs/MMBtu)/(monthly hours of operation)

*The controlled nitrogen oxide emission factor used shall be 0.06 lb/MMBtu of heat input. This emission factor shall be replaced by the number calculated whenever an emissions test or other modification, approved by the Division, is carried out for this emission point. Records of any such change in the emission factor used shall be maintained at the source.

The VOC emissions rate shall be calculated as follows:
VOC Emission Rate (tons/month) = Monthly natural gas consumption rate (mmscf/month) x 1000 (mmBTU/mmscf) x Controlled VOC emission factor* (lbs/mmBTU)/2000 (lbs/ton)

VOC Emission Rate (lbs/hr) = Monthly natural gas consumption rate (mmscf/month) x 1000 (mmBTU/mmscf) x Controlled VOC emission factor* (lbs/mmBTU) / (monthly hours of operation)

*The Controlled VOC emission factor shall be 0.0055 lbs/mmBTU of heat input. This emission factor shall be replaced by the number calculated from an emission test or other modification, and must be approved by the Division. Records of any such change in the emission factor used shall be maintained at the source.

The Carbon Monoxide emissions rate shall be calculated as follows:
CO Emission Rate (tons/month) = Monthly natural gas consumption rate (mmscf/month) x 1000 (mmBTU/mmscf) x Controlled CO emission factor* (lbs/mmBTU)/2000 (lbs/ton)

CO Emission Rate (lbs/hr) = Monthly natural gas consumption rate (mmscf/month) x 1000 (mmBTU/mmscf) x Controlled CO emission factor* (lbs/mmBTU) / (monthly hours of operation)

*The Controlled CO emission factor shall be 0.084 lbs/mmBTU of heat input. This emission factor shall be replaced by the number calculated from an emission test or other modification, and must be approved by the Division. Records of any such change in the emission factor used shall be maintained at the source.

Compliance with annual limits shall be calculated as a rolling twelve month total. The rolling 12 month total shall be calculated at the beginning of each month for the previous twelve months.

SECTION B - EMISSION POINTS, AFFECTED FACILITIES, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS (CONTINUED)

3. Testing Requirements:

The permittee shall test for PM, CO, and NOx within sixty (60) days after achieving the maximum production rate at which the affected facilities will be operated but not later than 180 days after initial start-up of such facilities, the permittee shall conduct a performance demonstration on the affected facilities in accordance with 401 KAR 50:055, General compliance requirements. VOC emissions testing must be completed within 180 days of KDAQ's request. These performance tests must also be conducted in accordance with General Provisions G(d)7 of this permit.

4. Specific Monitoring Requirements:

a. The permittee shall perform monthly visual inspections where:
   i. If no visible emissions are observed then no further monitoring is required.
   ii. If visible emissions are observed, the permittee shall perform a Method 9 reading.

b. The permittee shall monitor the hours of operation (per month, and 12 month rolling total), monthly natural gas usage rate and the calculated nitrogen oxide, VOC, CO and PM/PM10 emissions.

5. Specific Record Keeping Requirements:

The permittee shall keep records of the monthly qualitative visible emissions observations and Method 9 opacity readings, the natural gas usage, the calculated NOx, CO, VOC, and PM/PM10 emission rates, and the hours of operation (per month, and 12 month rolling total).

6. Specific Reporting Requirements:

Any exceedance in the emissions rates or visible emissions standard as specified in this permit shall be reported to the Division as soon as possible per General Condition F 8 of this permit.

SECTION B - EMISSION POINTS, AFFECTED FACILITIES, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS (CONTINUED)

08 (S1) - Lime unloading:
Description:
Pneumatic unloading of lime storage bin with a maximum capacity of 2000 lbs of lime per hour and a filter, with a control efficiency of 98%, used to control particulate emissions.
Construction commenced - March 1992.

APPLICABLE REGULATIONS:
401 KAR 59:010 - New process operations.

1. Operating Limitations:
None.

2. Emission Limitations:
Particulate emissions shall not exceed 7 tons per 12 month rolling period - Self imposed to preclude 401 KAR 51:017, Prevention of significant deterioration.
Visible emissions shall not equal or exceed 20% opacity.

The particulate emissions rate shall be calculated as follows:

Average Particulate Emissions = Rate (tons/month)	Lime processing rate (tons/month) x Controlled Particulate Emission Factor (lbs/ton lime processed) / 2000 (lbs/ton)

The controlled particulate emission factor used shall be 1.56 lbs/ton of lime processed. This emission factor shall be replaced by the number calculated whenever an emissions test or other modification, approved by the Division, is carried out for this emission point.

3. Testing Requirements:
If the weekly observations of the visible emissions from this emission point are found to be in excess of the limits prescribed above on more than two occasions in any three month period, a stack test shall be conducted to determine the emission factor used to calculate compliance with the allowable particulate emissions rate, as listed in this permit, within three months of the last exceedance. The owner or operator shall notify the Division of the performance test at least 30 days prior to the proposed test date and shall obtain approval from the Division for the procedures that will be used to determine compliance. Method 5 shall be used to determine the particulate emissions.

4. Specific Monitoring Requirements:
A qualitative observation of the visible emissions from this emission point shall be performed once a week, when the unit is in operation. The observer shall determine if the emission point had normal visible emissions. Further, a quarterly Method 9 reading by a certified visible emissions observer shall also be performed, simultaneous with the qualitative observation, to quantify the visible emissions. In addition, on any day that the qualitative reading shows visible emissions to be above normal, a Method 9 reading shall be performed. The calculated particulate emissions rate, hours of operation and lime processing rate shall be monitored to ensure compliance with the emission limits listed above.

SECTION B - EMISSION POINTS, AFFECTED FACILITIES, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS (CONTINUED)

5. Specific Record Keeping Requirements:

Records shall be maintained of the weekly and quarterly opacity measurements as required by this permit. Separate records shall also be maintained of the last two opacity measurements that are in excess of the emission limits specified in this permit, including the date and time of the exceedance.

Records shall also be maintained of the calculated particulate emission rates, monthly lime processing, and the monthly hours of operation. In addition, a record of the filter inspection shall be maintained at the source indicating the date of each inspection and whether the control is in proper working condition.

6. Specific Reporting Requirements:

Any exceedance in the particulate emissions rate or visible emissions standard specified in this permit shall be reported to the Division as soon as possible per General Condition F 8 of this permit. In addition, the owner or operator shall certify, annually, whether the opacity measurements were conducted continuously or intermittently, and if intermittent, the frequency of such measurements.

7. Specific Control Equipment Operating Conditions:

The filter used as the control equipment shall be inspected to ensure its proper operation. Inspection of the filter shall consist of a weekly check of the visible emissions, to confirm that the emissions are normal, as well as a quarterly visual inspection of the filter to determine whether they are in proper working condition. The filter shall be operated at all times that the pneumatic unloading is in operation.

SECTION B - EMISSION POINTS, AFFECTED FACILITIES, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS (CONTINUED)

09 (S-09) - Boiler #1:
Description:
Cleaver Brooks boiler with a natural gas fuel usage capacity of 36 MMBtu/hr.
Construction commenced - February, 1992.

10 (S-10) - Boiler #2:
Description:
Cleaver Brooks boiler with a natural gas fuel usage capacity of 36 MMBtu/hr.
Construction commenced - February, 1992.

110 (S-110) -Boiler # 3:
Description:
Standby boiler located adjacent to boiler #1 and # 2. Standby boiler will only be operated when boiler #1 or boiler #2 is not operating. Only two boilers (09, 10, or 110) will operate at the same time.
Proposed construction: November 2006

APPLICABLE REGULATIONS:
401 KAR 59:015 - New indirect heat exchangers.
401 KAR 60:005, NSPS (40 CFR 60, Subpart Dc is applicable to the indirect heat exchangers constructed after June 9, 1989)

1. Operating Limitations:
None.

2. Emission Limitations:

a. Particulate emissions shall not exceed 1 ton per 12 month rolling period
b. Sulfur dioxide emissions shall not exceed 1 ton per 12 month rolling period
c. Visible emissions shall not equal or exceed 20% opacity except for emissions during building a new fire for the period required to bring the boiler up to operating conditions, provided the method used is that recommended by the manufacturer and the time does not exceed the manufacturer's recommendations, and that a maximum of 40% opacity shall be permissible, for not more than 6 consecutive minutes in any 60 consecutive minutes, during cleaning the fire box or blowing soot.

The particulate and sulfur dioxide emission rates shall be calculated as follows:

Particulate Emission Rate (tons/month)	=	Natural gas usage rate (million cubic feet/month) x Particulate Emission Factor (lbs particulates/million cubic feet) / 2000 (lbs/ton)
Sulfur Dioxide Emission Rate (tons/month)	=	Natural gas usage rate (million cubic feet/month) x Sulfur Dioxide Emission Factor (lbs sulfur dioxide/million cubic feet) / 2000 (lbs/ton)

The particulate emission factor used shall be 5 lbs/million cubic feet of natural gas used and the sulfur dioxide emission factor used shall be 0.6 lbs/million cubic feet of natural gas used.

SECTION B - EMISSION POINTS, AFFECTED FACILITIES, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS (CONTINUED)

These emission factors shall be replaced by the numbers calculated whenever an emissions test or other modification, approved by the Division, is carried out for this emission point.

3. Testing Requirements:

If the annual observations of the visible emissions from this emission point are found to be in excess of the limits prescribed above, a stack test shall be conducted to determine the emission factor used to calculate the particulate emissions rate, as listed in this permit, within three months of the last exceedance. The owner or operator shall notify the Division of the performance test at least 30 days prior to the proposed test date and shall obtain approval for the test procedures. Method 5 shall be used to determine the particulate emissions.

4. Specific Monitoring Requirements:

Opacity monitoring shall be performed by a certified visible emissions observer at least once per year during operation of the boiler. The calculated particulate and sulfur dioxide emissions and natural gas usage rates shall be monitored to ensure compliance with the emission limitations listed above.

5. Specific Record Keeping Requirements:

a. Records shall be maintained of the annual opacity measurements as required by this permit.

b. Records shall be maintained of the calculated particulate and sulfur dioxide emission rates, and the monthly natural gas usage rate.

c. The owner or operator of each affected facility shall record and maintain records of the amounts of each fuel combusted during each day [40 CFR 60.48c(g)].

6. Specific Reporting Requirements:

Any exceedance in the particulate or sulfur dioxide emissions rate or visible emissions standard specified in this permit shall be reported to the Division as soon as possible per General Condition F8 of this permit. In addition, the owner or operator shall certify, annually, whether the opacity measurements were conducted continuously or intermittently, and if intermittent, the frequency of such measurements.

SECTION B - EMISSION POINTS, AFFECTED FACILITIES, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS (CONTINUED)

22 (S-25) - Slab Grinder:
Description:
A slab grinder with a maximum capacity of 135 tons of steel per hour having a baghouse, with a control efficiency of 98%, to control particulate emissions.
Construction commenced - May 1996.

APPLICABLE REGULATIONS:
401 KAR 59:010 - New process operations.

1. Operating Limitations:
None.

2. Emission Limitations:
Particulate emissions shall not exceed 5 tons per 12 month rolling period. - Self imposed to preclude 401 KAR 51:017 – Prevention of Significant Deterioration.
Visible emissions shall not equal or exceed 20% opacity.

The particulate emission rates shall be calculated as follows:

Particulate Emission Rate = (tons/month)	Steel processing rate (tons of steel processed/month) x Controlled Particulate Emission Factor (lbs/ton of steel processed) / 2000 (lbs/ton)

The controlled particulate emission factor used shall be 0.00695 lbs/ton steel processed. This emission factor shall be replaced by the number calculated whenever an emissions test or other modification, approved by the Division, is carried out for this emission point.

3. Testing Requirements:
If the weekly observations of the visible emissions from this emission point are found to be in excess of the limits prescribed above on more than two occasions in any three month period, a stack test shall be conducted to determine the emission factor used to calculate compliance with the allowable particulate emissions rate, as listed in this permit, within three months of the last exceedance. The owner or operator shall notify the Division of the performance test at least 30 days prior to the proposed test date and shall obtain approval from the Division for the procedures that will be used to determine compliance. Method 5 shall be used to determine the particulate emissions.

4. Specific Monitoring Requirements:
A qualitative observation of the visible emissions from this emission point shall be performed once a week, when the unit is in operation. The observer shall determine if the emission point had normal visible emissions. Further, a quarterly Method 9 reading by a certified visible emissions observer shall also be performed, simultaneous with the qualitative observation, to quantify the visible emissions. In addition, on any day that the qualitative reading shows visible emissions to be above normal, a Method 9 reading shall be performed.

SECTION B - EMISSION POINTS, AFFECTED FACILITIES, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS (CONTINUED)

The calculated particulate emissions and steel processing rates shall be monitored to ensure compliance with the emission limitations listed above.

5. Specific Record Keeping Requirements:

Records shall be maintained of the weekly and quarterly opacity measurements as required by this permit. Records shall also be maintained of the last two opacity measurements that are in excess of the emission limits specified in this permit.

Records shall be maintained of the calculated particulate emission rates, the monthly steel processing rate, and the monthly hours of operation. In addition, a record of the baghouse inspection shall be maintained at the source indicating the date of each inspection and whether the control is in proper working condition.

6. Specific Reporting Requirements:

Any exceedance in the particulate emissions rate or visible emissions standard specified in this permit shall be reported to the Division as soon as possible per General Condition F 8 of this permit. In addition, the owner or operator shall certify, annually, whether the opacity measurements were conducted continuously or intermittently, and if intermittent, the frequency of such measurements.

7. Specific Control Equipment Operating Conditions:

The baghouse used as the control equipment shall be inspected to ensure its proper operation. Inspection of the baghouse shall consist of a weekly check of the visible emissions, to confirm that the emissions are normal, as well as a quarterly visual inspection of the bags to determine whether they are in proper working condition. The baghouse shall be operated at all times that the grinder is in operation.

SECTION B - EMISSION POINTS, AFFECTED FACILITIES, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS (CONTINUED)

23 (S-22) - Reheat furnace:
Description:
A Stein Heurty reheat furnace with a maximum processing rate of 250 tons of steel per hour and a maximum natural gas usage rate of 169 MMBtu/hr.
Construction commenced - May 1996.

APPLICABLE REGULATIONS:
None.

1. Operating Limitations:
Natural gas usage shall not exceed 1480 mm scf per 12 month rolling total - Self imposed to preclude 401 KAR 51:017, Prevention of significant deterioration.
Compliance may be demonstrated through monitoring and recordkeeping as specified below.

2. Emission Limitations:
None.

3. Testing Requirements:
None.

4. Specific Monitoring Requirements:
The natural gas usage shall be monitored to ensure compliance with the operating limitations listed above.

5. Specific Record Keeping Requirements:
The usage of natural gas in this furnace shall be recorded monthly. Records shall also be maintained of the 12 month rolling total natural gas usage.

6. Specific Reporting Requirements:
Any exceedance in the 12 month rolling total natural gas usage over the limit stated in this permit shall be reported to the Division as soon as possible per General Condition F 8 of this permit. Following an exceedance, the company shall submit, within 30 days of the end of the month, the rolling 12 month average of the gas usage at this furnace, for a period of at least 12 months.

SECTION B - EMISSION POINTS, AFFECTED FACILITIES, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS (CONTINUED)

24 (S-24) - Roughing Mill:
Description:
A Hitachi roughing mill with a maximum processing capacity of 250 tons of steel per hour having a centrifugal dust collection system, with a control efficiency of 91%, to control particulate emissions. Construction commenced - May 1996.

APPLICABLE REGULATIONS:
401 KAR 59:010 - New process operations.

1. Operating Limitations:
None.

2. Emission Limitations:
Particulate emissions shall not exceed 53 tons per 12 month rolling total - Self imposed to preclude 401 KAR 51:017, Prevention of significant deterioration.
Visible emissions shall not equal or exceed 20% opacity.

The particulate emissions rate shall be calculated as follows:

Particulate Emission Rate = (tons/month)	Steel processing rate (tons of steel processed/month) x Controlled Particulate Emission Factor (lbs/ton of steel processed) / 2000 (lbs/ton)

The controlled particulate emission factor used shall be 0.0886 lbs/ton steel processed. This emission factor shall be replaced by the number calculated whenever an emissions test or other modification, approved by the Division, is carried out for this emission point.

3. Testing Requirements:
If the weekly observations of the visible emissions from this emission point are found to be in excess of the limits prescribed above on more than two occasions in any three month period, a stack test shall be conducted to determine the emission factor used to calculate compliance with the allowable particulate emissions rate, as listed in this permit, within three months of the last exceedance. The owner or operator shall notify the Division of the performance test at least 30 days prior to the proposed test date and shall obtain approval from the Division for the procedures that will be used to determine compliance. Method 5 shall be used to determine the particulate emissions.

4. Specific Monitoring Requirements:
A qualitative observation of the visible emissions from this emission point shall be performed once a week, when the unit is in operation. The observer shall determine if the emission point had normal visible emissions. Further, a quarterly Method 9 reading by a certified visible emissions observer shall also be performed, simultaneously with the qualitative observation, to quantify the visible emissions. In addition, on any day that the qualitative reading shows visible emissions to be above normal, a Method 9 reading shall be performed.

SECTION B - EMISSION POINTS, AFFECTED FACILITIES, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS (CONTINUED)

5. Specific Monitoring Requirements:

The calculated particulate emissions and steel processing rates shall be monitored to ensure compliance with the emission limitations listed above.

6. Specific Record Keeping Requirements:

Records shall be maintained of the weekly and quarterly opacity measurements as required by this permit. Records shall also be maintained of the last two opacity measurements that are in excess of the emission limits specified in this permit, including the date and time of each exceedance.

Records shall be maintained of the calculated particulate emission rates, the monthly steel processing rates, and the monthly hours of operation. In addition, a record of the visual inspections of the control equipment shall be maintained at the source indicating the date of each inspection and whether the control equipment is in proper working condition.

7. Specific Reporting Requirements:

Any exceedance in the particulate emissions rate or visible emissions standard specified in this permit shall be reported to the Division as soon as possible per General Condition F 8 of this permit. In addition, the owner or operator shall certify, annually, whether the opacity measurements were conducted continuously or intermittently, and if intermittent, the frequency of such measurements.

8. Specific Control Equipment Operating Conditions:

The centrifugal particulate controls used as the control equipment shall be inspected to ensure its proper operation. Inspection of the centrifugal particulate controls shall consist of a weekly check of the visible emissions, to confirm that the emissions are normal, as well as a quarterly visual inspection of the inlet and outlet ducting of the controls, as well as their general condition, to determine whether they are in proper working condition. The controls shall be operated at all times that the roughing mill is in operation.

SECTION B - EMISSION POINTS, AFFECTED FACILITIES, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS (CONTINUED)

25 (S-22A, S-23b, S26) - Finishing Mill:
Description:
A Hitachi finishing mill (Steckel) coiler, with two 6 MMBtu/hr natural gas burners, and with a maximum processing capacity of 250 tons of steel per hour equipped and having a Busch centrifugal dust collection system, with a control efficiency of 91%, to control particulate emissions.
Construction commenced - May 1996.

APPLICABLE REGULATIONS:
401 KAR 59:010 - New process operations.

1. Operating Limitations:
None.

2. Emission Limitations:
Particulate emissions shall not exceed 53 tons per 12 month rolling total - Self imposed to preclude 401 KAR 51:017, Prevention of significant deterioration.
Visible emissions shall not equal or exceed 20% opacity.

The particulate emissions rate shall be calculated as follows:

Particulate Emission Rate = (tons/month)	[Steel processing rate (tons of steel processed/month) x Controlled Steel Particulate Emission Factor (lbs/ton of steel processed) + Natural gas usage rate (million cubic feet/month) x Natural Gas Particulate Emission Factor (lbs particulates/million cubic feet)] / 2000 (lbs/ton)

The controlled steel particulate emission factor used shall be 0.0886 lbs/ton steel processed and the natural gas particulate emission factor used shall be 5 lbs/million cubic feet. This emission factor shall be replaced by the number calculated whenever an emissions test or other modification, approved by the Division, is carried out for this emission point.

3. Testing Requirements:
If the weekly observations of the visible emissions from this emission point are found to be in excess of the limits prescribed above on more than two occasions in any three month period, a stack test shall be conducted to determine the emission factor used to calculate compliance with the allowable particulate emissions rate, as listed in this permit, within three months of the last exceedance. The owner or operator shall notify the Division of the performance test at least 30 days prior to the proposed test date and shall obtain approval from the Division for the procedures that will be used to determine compliance. Method 5 shall be used to determine the particulate emissions.

SECTION B - EMISSION POINTS, AFFECTED FACILITIES, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS (CONTINUED)

4. Specific Monitoring Requirements:

A qualitative observation of the visible emissions from this emission point shall be performed once a week, when the unit is in operation. The observer shall determine if the emission point had normal visible emissions. Further, a quarterly Method 9 reading by a certified visible emissions observer shall also be performed, simultaneous with the qualitative observation, to quantify the visible emissions. In addition, on any day that the qualitative reading shows visible emissions to be above normal, a Method 9 reading shall be performed.

The calculated particulate emissions, steel usage, and natural gas usage rates shall be monitored to ensure compliance with the emissions limits listed above.

5. Specific Record Keeping Requirements:

Records shall be maintained of the weekly and quarterly opacity measurements as required by this permit. Records shall also be maintained of the last two opacity measurements that are in excess of the emission limits specified in this permit.

Records shall be maintained of the calculated particulate emission rates, the monthly steel processing rates, and the monthly hours of operation. In addition, a record of the visual inspections of the control equipment shall be maintained at the source indicating the date of each inspection and whether the control equipment is in proper working condition.

6. Specific Reporting Requirements:

Any exceedance in the particulate emissions rate or visible emissions standard specified in this permit shall be reported to the Division as soon as possible per General Condition F 8 of this permit. In addition, the owner or operator shall certify, annually, whether the opacity measurements were conducted continuously or intermittently, and if intermittent, the frequency of such measurements.

7. Specific Control Equipment Operating Conditions:

The centrifugal particulate controls used as the control equipment shall be inspected to ensure its proper operation. Inspection of the centrifugal particulate controls shall consist of a weekly check of the visible emissions, to confirm that the emissions are normal, as well as a quarterly visual inspection of the inlet and outlet ducting of the controls, as well as their general condition, to determine whether they are in proper working condition. The controls shall be operated at all times that the finishing mill is in operation.

SECTION B - EMISSION POINTS, AFFECTED FACILITIES, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS (CONTINUED)

26 (26) – **Plate Annealing Furnace**
Description:
An annealing furnace with a maximum processing rate of 40 tons of stainless steel input per hour, a maximum natural gas usage rate of 16.5 MMBtu/hr, and ultra-low NOx burners used to control nitrogen oxide emissions.
Construction Commenced: September 10, 1999

APPLICABLE REGULATIONS:
401 KAR 59:010 - New process operations.
401 KAR 51:017 – Prevention of significant deterioration

1. Operating Limitations:
None

2. Emission Limitations:
a) Visible emissions shall not equal or exceed 20 percent opacity [401 KAR 59:010, Section 3(2)]
b) Nitrogen oxide emissions shall not exceed 1.39 pounds per hour and 6.1 tons per 12-month rolling total.
c) Hourly particulate emissions, as measured by Reference Method 5, Appendix A, 40 CFR 60, average over three hours shall not exceed 0.13 pounds per hour and 0.55 tons per year 12-month rolling total.
d) VOC emissions shall not exceed 0.09 pounds per hour and 0.40 tons per year.
e) Carbon monoxide emissions shall not exceed 1.39 pounds per hour and 6.1 tons per year

Compliance Demonstration Method:
To provide reasonable assurance that the emission limitations are being met, the permittee shall monitor the monthly natural gas usage rate and monthly hours of operation.

The particulate emissions rate shall be calculated as follows:

Particulate Emission Rate = (tons/month)	Monthly natural gas consumption rate (mmscf/month) x 1000 (mmBTU/mmscf) x Controlled PM emission factor* (lbs/mmBTU)/2000 (lbs/ton)
Particulate Emission Rate = (lbs/hr)	Monthly natural gas consumption rate (mmscf/month) x 1000 (mmBTU/mmscf) x Controlled PM emission factor* (lbs/mmBTU) / (monthly hours of operation)

*The Controlled PM emission factor shall be 0.0076 lbs/mmBTU of heat input. This emission factor shall be replaced by the number calculated from an emission test or other modification, and must be approved by the Division. Records of any such change in the emission factor used shall be maintained at the source.

The nitrogen oxide emission rate for this emission point shall be calculated as follows:

SECTION B - EMISSION POINTS, AFFECTED FACILITIES, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS (CONTINUED)

Nitrogen Oxide Emission Rate (tons/month) = Monthly gas consumption rate (mmscf/month) x 1000 MMBtu/mmscf x Controlled Nitrogen Oxide Emission Factor (lbs/MMBtu)

The controlled nitrogen oxide emission factor used shall be 0.0845 lb/MMBtu of heat input. This emission factor shall be replaced by the number calculated whenever an emission test or other modification, approved by the Division, is carried out for this emission point. Records of any such change in the emission factor used shall be maintained at the source.

The VOC emissions rate shall be calculated as follows:

VOC Emission Rate (tons/month) = Monthly natural gas consumption rate (mmscf/month) x 1000 (mmBTU/mmscf) x Controlled VOC emission factor* (lbs/mmBTU)/2000 (lbs/ton)

VOC Emission Rate (lbs/hr) = Monthly natural gas consumption rate (mmscf/month) x 1000 (mmBTU/mmscf) x Controlled VOC emission factor* (lbs/mmBTU) / (monthly hours of operation)

*The Controlled VOC emission factor shall be 0.0055 lbs/mmBTU of heat input. This emission factor shall be replaced by the number calculated from an emission test or other modification, and must be approved by the Division. Records of any such change in the emission factor used shall be maintained at the source.

The Carbon Monoxide emissions rate shall be calculated as follows:

CO Emission Rate (tons/month) = Monthly natural gas consumption rate (mmscf/month) x 1000 (mmBTU/mmscf) x Controlled CO emission factor* (lbs/mmBTU)/2000 (lbs/ton)

CO Emission Rate (lbs/hr) = Monthly natural gas consumption rate (mmscf/month) x 1000 (mmBTU/mmscf) x Controlled CO emission factor* (lbs/mmBTU) / (monthly hours of operation)

*The Controlled CO emission factor shall be 0.084 lbs/mmBTU of heat input. This emission factor shall be replaced by the number calculated from an emission test or other modification, and must be approved by the Division. Records of any such change in the emission factor used shall be maintained at the source.

Compliance with annual limits shall be calculated as a rolling twelve month total. The rolling 12 month total shall be calculated at the beginning of each month for the previous twelve months.

SECTION B - EMISSION POINTS, AFFECTED FACILITIES, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS (CONTINUED)

4. Testing Requirements:

None

5. Specific Monitoring Requirements:

a. The permittee shall perform monthly visual inspections where:
   i. If no visible emissions are observed then no further monitoring is required.
   ii. If visible emissions are observed, the permittee shall perform a Method 9 reading.

b. The permittee shall monitor hours of operation (per month and 12 month rolling total), natural gas usage rates, and the calculated nitrogen oxide, VOC, CO and PM/PM10 emissions.

6. Specific Record Keeping Requirements:

The permittee shall keep records of the monthly qualitative visible emission observations and Method 9 opacity readings, monthly natural gas usage, hours of operation (per month and 12-month rolling period), and the calculated NOx, VOC, CO, and PM/PM10 emission rates.

7. Specific Reporting Requirements:

Any exceedance in the emissions rates or visible emissions standard as specified in this permit shall be reported to the Division as soon as possible per General Condition F 8 of this permit.

SECTION B - EMISSION POINTS, AFFECTED FACILITIES, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS (CONTINUED)

28 (28) - **Plate Pickling Section**
Description:
Acid pickling of stainless steel using nitric and hydrofluoric acids with a maximum processing capacity of 40 tons of stainless steel input per hour and the use of a scrubber for control of nitrogen oxides, nitric acid, and hydrofluoric acid.
Construction Commenced: September 10, 1999

APPLICABLE REGULATIONS:
401 KAR 51:017 – Prevention of significant deterioration of air quality

1. Operating Limitations:
None

2. Emission Limitations:
Nitrogen oxide emissions shall not exceed 100 ppm by volume, 1.44 pounds per hour and 6.32 tons per year (rolling twelve month total).

The following formulas will be used in calculating the NO_x emissions:

NO_x emissions rate (tons/day) = Average NO_2 concentration in exit stream (ppm by volume) x 8.01E-08 (lbs/cu. ft./ppm by volume) x 180,000 (cu. ft./hr) x hours of operation (hrs/day) x 0.0005 (tons/lb)

Monthly NO_x emissions rate (tons/month) = Daily NO_x emissions rate (tons/day) x days of operation per month (days/month)

The NO_2 concentration is the daily average concentration measured in the exit gas stream as per the monitoring requirements listed below.

Rolling twelve month compliance: The monthly NOx emission rate, as calculated above, shall be used to demonstrate compliance with the rolling twelve month total limit.

3. Testing Requirements:
NOx monitor shall be calibrated, operated, and maintained according to manufacturer's recommendations.

4. Specific Monitoring Requirements:
The concentration of NO_2 in the exit stream of the scrubber, as recorded by the analyzers, shall be monitored hourly.

If the NOx monitor becomes nonoperational, additional process monitoring of the control device will be required. The pH and pressure drop across scrubber will be recorded on an hourly basis until the hourly NOx monitoring is resumed.

5. Specific Recordkeeping Requirements:
Records of the hourly and monthly calculated NO_x emissions rates shall be maintained at the

SECTION B - EMISSION POINTS, AFFECTED FACILITIES, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS (CONTINUED)

source. Records of the start and end times of operation of the pickling operation and the associated scrubber shall be maintained.

6. Specific Reporting Requirements:

Reports of any exceedance of the emission limitations listed above shall be submitted to the Division as soon as possible per General Condition F8 of this permit.

7. Specific Control Equipment Operating Conditions:

a. The scrubber shall be operated at all times that the pickling unit is in operation.

b. The permittee shall monitor and record the following Scrubber operating parameters at least once daily:
   1. pH of the scrubbing liquor
   2. Pressure Drop across the scrubber

SECTION B - EMISSION POINTS, AFFECTED FACILITIES, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS (CONTINUED)

57(26) Electric Arc Furnace 1 (EAF) and the associated dust handling equipment
105(105) Electric Arc Furnace 2 (EAF) and the associated dust handling equipment

Description:
These emission points cover emissions due to charging, melting, and tapping. The processing rate of each EAF is 154 tons per batch. The control equipment of each EAF is a direct evacuation control system consisting of ductwork which draws the emissions from the furnace to a baghouse. Each furnace is also equipped with doghouse vents and an overhead canopy hood vented to its respective baghouse. Construction of the EAF 1 Commenced: November 1, 1999. Construction of EAF2 Commenced: July 1, 2003 (as standby EAF).

58(27) Argon Oxygen Decarburization 1 (AOD) Vessel
106 (106) Argon Oxygen Decarburization 2 (AOD) Vessel
Description:
The argon-oxygen decarburization vessel is used for the chemical refining of the stainless steel. The processing rate is 165 tons per batch. The emissions from each AOD will be vented to separate baghouses. Construction Commenced: November 1, 1999. Proposed Construction Date for AOD 2: February 2, 2008

APPLICABLE REGULATIONS:
401 KAR 60:005, 40 CFR Part 60 standards of performance for new stationary sources, incorporating Federal Regulation 40 CFR 60, Subpart AAa, Standards of performance for steel plants: electric arc furnaces and argon-oxygen decarburization vessels constructed after August 7, 1983, by reference.
401 KAR 51:017, Prevention of significant deterioration of air quality

1. Operating Limitations:

BACT limitations:

a. The annual average liquid steel production rates as cast shall not exceed 133 tons per hour for each EAF and each the AOD.
b. The annual liquid steel produced as cast should not exceed 1,653,804 U.S short tons (1,500,000 metric tons).
c. All stainless steel scrap shall contain low concentrations of impurities.

2. Emission Limitations:

a. The EAF1 baghouse shall not emit pollutants in excess of the following self-imposed/BACT limitations averaged over three heats:
   i. Particulate emissions: 13.94 pounds per hour and 0.10 pounds per ton .
   ii. Carbon monoxide: 2 pounds per ton and 265.76 pounds per hour.
   iii. Nitrogen dioxide: 1.32 pound per ton and 175 pounds per hour.
   iv. Volatile organic compound: 0.150 pound per ton and 19.95 pounds per hour.
   v. Lead: 0.001 pound per ton and 0.167 pound per hour.
   vi. Graphite electrode sulfur content shall not exceed 0.02%.

SECTION B - EMISSION POINTS, AFFECTED FACILITIES, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS (CONTINUED)

The EAF2 baghouse shall not emit pollutants in excess of the following self-imposed/BACT limitations averaged over three heats:

i. Particulate emissions: 25.71 pounds per hour and 96.654 pounds per ton.
ii. Carbon monoxide: 2 pounds per ton and 266 pounds per hour.
iii. Nitrogen dioxide: 1.00 pound per ton and 133 pounds per hour.
iv. Volatile organic compound: 0.150 pound per ton and 19.95 pounds per hour.
vii. Lead: 1.158 pound per ton and 0.309 pound per hour.
viii. Graphite electrode sulfur content shall not exceed 0.02%.

b. The AOD1 baghouse shall not emit pollutants in excess of the following self-imposed/BACT limitations averaged over three heats:

i. Particulate emissions: 16.98 pounds per hour and 0.13 pounds per ton.
ii. Carbon monoxide: 2.06 pounds per ton and 273.75 pounds per hour.
iii. Nitrogen dioxide: 0.578 pound per ton and 76.83 pounds per hour.
iv. Lead: 0.002 pound per ton and 0.204 pound per hour.

The AOD2 baghouse shall not emit pollutants in excess of the following self-imposed/BACT limitations averaged over three heats:

i. Particulate emissions: 25.71 pounds per hour and 38.66 pounds per ton.
ii. Carbon monoxide: 2.06 pounds per ton and 273.98 pounds per hour.
iii. Nitrogen dioxide: 0.58 pound per ton and 76.87 pounds per hour.
v. Lead: 0.470 pound per ton and 0.31 pound per hour.

c. EAF 1 and EAF 2 Annual Emission Limitations**:**

The EAF baghouses shall not emit pollutants in excess of the following self-imposed/BACT limitations:

i. Particulate emissions: 138.24 tons per year.
ii. Carbon monoxide: 1653.36 tons per year.
iii. Nitrogen dioxide: 1010.86 tons per year..
iv. Volatile organic compound:124.04 tons per year.
v. Lead: 1.66 tons per year.

AOD 1 and AOD 2 Annual Emission Limitations**:**

The AOD baghouses shall not emit pollutants in excess of the following self-imposed/BACT limitations:

i. Particulate emissions: 138.24 tons per year.
ii. Carbon monoxide: 1703 tons per year.
iii. Nitrogen dioxide: 447.87 tons per year.
iv. Lead: 1.70 tons per year.

Visible emissions from the EAF and AOD control devices shall not equal or exceed 3% opacity each.

SECTION B - EMISSION POINTS, AFFECTED FACILITIES, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS (CONTINUED)

d. Visible emissions from the melting shop shall not exhibit 6% opacity or greater.
e. Visible emissions from dust handling equipment shall not equal or exceed 10% opacity

5. Testing Requirements:

a. Stack tests shall be conducted as specified in Section G(d)5, to determine compliance with the allowable particulate, NO_x, CO, lead, and VOC (EAF baghouse only) emission rates, as listed in this permit, from the EAF and AOD baghouses. The permittee shall notify the Division of the Performance Test at least 30 days prior to the proposed test date and shall obtain approval from the Division for the procedures that will be used to determine compliance (See Section D). Annual performance tests shall also be performed within 90 calendar days of the anniversary dates of the initial performance tests for particulate, NO_x, CO, lead, and VOC (EAF baghouse only). If two consecutive annual tests result in specified emissions being less than or equal to 75% of the standard for that pollutant, specified herein, then no additional testing shall be required for that pollutant during the term of this permit.
b. Performance tests shall be performed in accordance with methods referenced in 401 KAR 50:015, Documents incorporated by reference, for the EAF and AOD baghouses to determine compliance with the appropriate pollutant concentration limitations. The sampling time and sample volume for particulates for each run shall be at least 4 hours and 4.50 dscm (160 dscf) and when a single EAF or AOD vessel is sampled, the sampling time shall include an integral number of heats.
c. During the performance test, no gaseous diluents shall be added to the effluent gas stream after the fabric in the control equipment, unless the amount of dilution is separately determined and considered in the determination of the emissions.
d. When emissions from the EAF or AOD are combined with emissions from facilities not subject to the provisions of this regulation, but controlled by a common capture system and control device, the permittee shall use either or both of the following procedures during a performance test:
    i. Determine compliance using the combined emissions.
    ii. Use a method that is approved by the Division and that compensates for the emissions from the facilities not subject to the provisions of this subpart.
e. When emissions from the EAF or AOD are combined with emissions from facilities not subject to the provisions of this regulation, the permittee shall demonstrate compliance with the melt shop opacity based on emissions from only the affected facilities
f. Method 9 shall be used to determine compliance with the opacity limitations.
g. To demonstrate compliance, test runs shall be performed concurrently, unless inclement weather interferes.
h. The performance test shall be used to establish the minimum control system fan amperage and all damper positions, during all periods in which the hood is operated for the purpose of capturing emissions from the EAF or AOD.

SECTION B - EMISSION POINTS, AFFECTED FACILITIES, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS (CONTINUED)

i. During the performance test, the permittee shall monitor the following information for all heats covered by the test:
   i. Charge weights and materials, and tap weights and materials;
   ii. Heat times, including start and stop times, and a log of process operation, including periods of no operation during testing and the pressure inside an EAF when direct-shell evacuation control systems are used;
   iii. Control device operation log; and
   iv. Reference Method 9 data.

j. The owner or operator may petition the Division to approve further testing of particulate emissions from the baghouse whenever the owner or operator can demonstrate to the Division's satisfaction that the EAF or AOD operating conditions upon which the parameters were established are no longer applicable. Any such petition shall be made at least 30 days prior to the proposed performance test and shall include all the procedures that will be used to determine compliance.

6. Specific Monitoring Requirements:

a. The control system fan amperes shall fall within the same range of values recorded during the latest performance test (See testing requirements). The permittee shall maintain records of the control system fan motor amperes and damper positions on a once-per-shift basis. However, the permittee shall have the option of installing, calibrating, and maintaining a monitoring device that continuously records the volumetric flow rate at the baghouse inlet. A shop opacity compliance demonstration shall be performed to establish volumetric flow rate and damper positions.

b. The permittee shall perform monthly operational status inspections of the equipment that is important to the performance of the total capture system, including pressure sensors, dampers, and damper switches. This inspection shall include observations of the physical appearance of the equipment, including presence of holes in ductwork or hoods, flow constrictions caused by dents or accumulated dust in the ductwork, and fan erosion. Deficiencies shall be noted and proper maintenance performed.

c. The permittee shall conduct daily visual emissions observations as an alternative to furnace static pressure monitoring. Under the alternative, the permittee shall perform shop opacity observations once per day during a meltdown and refining period in order to monitor the pressure of the free space inside the EAF.

d. A certified visible emissions observer shall read visible emissions as follows:
   i. Visible emission observations from the baghouse shall be conducted at least once per day when the furnace is operating in the melting and refining period.
   ii. Visible emission observations from the melt shop shall be conducted at least once per day for a period of six months from the issuance date of this permit. If no visible emission exceedances were recorded during a six month period, then the permittee shall subsequently conduct the observations on a once per month basis. However, if the permittee has an opacity exceedance during the first six months of monitoring, then the permittee shall continue monitoring opacity based on a daily basis until a six-months monitoring period free of any opacity exceedances has been achieved.

SECTION B - EMISSION POINTS, AFFECTED FACILITIES, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS (CONTINUED)

iii. Visual emission observations shall be taken in accordance with Method 9 and, for at least three 6-minute periods, the opacity shall be recorded for each point(s) where visible emissions are observed.

iv. Where it is possible to determine that a number of these visible emission sites relate to only one incident of visible emissions, one set of three 6-minute observations shall be required. In this case, Method 9 observations must be made for the site of highest opacity that directly relates to the cause (or location) of visible emissions observed during a single incident.

7. Specific Recordkeeping Requirements:

The permittee shall keep records of the following:

a. The control system fan motor amperes and damper positions on a once-per-shift basis.
b. The monthly operational status inspections of the equipment that is important to the performance of the total capture system. Deficiencies shall be noted.
c. Opacity readings.
d. The daily processing rates of the EAFs and AODs.

8. Specific Reporting Requirements:

a. The permittee shall record and report opacity readings from the baghouse for any six-minute average that is in excess of 3% opacity to the Florence Regional Office semi-annually.
b. The permittee shall operate the control system fan motor amperes at values not to exceed plus or minus 15% of the established value. Values not within this range may be considered by the Division to be unacceptable operation and maintenance of the affected facility. Operation at such values shall be reported to the Florence Regional Office semi-annually.
c. The permittee shall monitor the melt shop opacity on a daily basis as an alternative to continuously monitoring the furnace static pressure. The daily shop opacity readings in excess of 8% shall be reported to the Florence Regional Office semi-annually.
d. The permittee shall obtain approval from the Division of the procedure(s) that will be used to determine compliance for the standard under 60.275a (b)(2) or a combination of (b)(1) and (b)(2) of Section 60.275a (b). Notification of the procedure(s) to be used must be postmarked 30 days prior to the performance test.
e. The performance test report required by Section 60.276a (f), shall include the information specified in Section 60.276a (f) (1) – (22).
f. The permittee shall report any opacity exceedances to the Florence Regional Office in the semi-annual report.

9. Specific Control Equipment Operating Conditions:

The pressure drop across the baghouse shall be maintained within the operating ranges established as per the manufacturer's recommendations and records shall be kept of the readings. The baghouse shall be operated at all times that the melt shop is in operation.

SECTION B - EMISSION POINTS, AFFECTED FACILITIES, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS (CONTINUED)

31 (S-31) Ferro Alloy/ Flux Addition System

Description:

This addition system automatically supplies flux materials and ferro alloys to the EAF and AOD directly from their storage compartments at a processing rate 1000 tons per hour. The control equipment is a baghouse. Construction Commenced: November 1, 1999.

32 (S-32) Continuous Caster with Torch Cutting

Description:

The continuous caster has a maximum processing rate of 165 tons per hour. The caster is equipped with an oxy-fueled torch cutting machine and a baghouse to control particulate emissions generated during pouring and torch cutting. Construction Commenced: November 1, 1999.

33 (S-33) Slag Dumping

Discription:

Slag is dumped inside an enclosure where it is then managed and processed by Recmix under Permit V-03-051. Construction Commenced: November 1, 1999

34 (S-34) Lime Hopper

Description:

The lime hopper has a processing rate of 80 tons per hour. Construction Commenced: November 1, 1999.

36 (S-36) Receiving Bin/ Filling Station

Description:

The processing rate for this emission point is 132 tons per hour. Construction Commenced: November 1, 1999.

65 (S-65) Grinding Machine

Description:

The maximum processing rate for this emission point is 130 tons per hour, and the annual average processing rate is 35 tons per hour. Construction Commenced: March 15, 2002.

67 (S-67) Roughing Mill

Description:

The maximum processing rate for this emission point is 130 tons per hour, and the annual average processing rate is 35 tons per hour. Construction Commenced: March 15, 2002.

68 (S-68) Bars Cut-Off Station 1

Description:

The maximum processing rate for this emission point is 75 tons per hour, and the annual average processing rate is 35 tons per hour. Construction Commenced: March 15, 2002.

69 (S-69) Bars Cut-Off Station 2

Description:

The maximum processing rate for this emission point is 75 tons per hour, and the annual average processing rate is 35 tons per hour. Construction Commenced: March 15, 2002.

SECTION B - EMISSION POINTS, AFFECTED FACILITIES, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS (CONTINUED)

76 (S-76) Wire Cold Rolling

Description:

The maximum processing rate for this emission point is 50 tons per hour, and the annual average processing rate is 15 tons per hour. Construction Commenced: March 15, 2002.

87 (S-87) Salt Bath

Description:

The maximum processing rate for this emission point is 130 tons per hour, and the annual average processing rate is 32 tons per hour. Construction Commenced: March 15, 2002.

APPLICABLE REGULATIONS:

401 KAR 59:010 – New process operations
401 KAR 51:017 - Prevention of significant deterioration of air quality

1. Operating Limitations:

None

2. Emission Limitations:

a. Visible emissions shall not equal or exceed 20 percent opacity, as determined by using Reference Method 9, Appendix A, 40 CFR 60.
b. Visible emissions shall not equal or exceed 3% opacity for the common baghouse associated with emission point 36(36).
c. For each emission point the emissions as measured by Reference Methods listed in Appendix A, 40 CFR 60, shall not exceed the limits specified below:

i. For Ferro Alloy/ Flux Addition System, Emission Point 31 (S-31):
Particulate emissions shall not exceed 1.44 pounds per hour. (Self-imposed.)

ii. For Continuous Caster with Torch Cutting, Emission point 32 (S-32):
Particulate emissions shall not exceed 0.95 pounds per hour. (Self-imposed.) The combined emission limitations for carbon monoxide and nitrogen dioxide are 0.5235 pound per hour and 0.6304 pound per hour, respectively averaged over three heats. (Self-imposed.)

iii. For Slag Dumping, Emission point 33 (S-33):
Particulate emissions form slag dumping shall not exceed 1.36E-04 pounds per hour (Self-imposed.).

iv. For Lime Hopper, Emission point 34 (S-34):
The hopper vented to the EAF baghouse (emission point #57) with a combined particulate emissions limitation of 13.94 pounds per hour. (Self-imposed.)

v. For Receiving Bin/ Filling Station, Emission point 36 (S-36):
This operation is vented to the EAF baghouse (emission point #57) with a combined particulate emissions limitation of 13.94 pounds per hour. (Self-imposed.)

vi. For Grinding Machine, Emission Point 65 (S-65):
This operation is vented to a baghouse (emission point #65) with a particulate emissions limitation of 0.86 pounds per hour. (Self-imposed.)

SECTION B - EMISSION POINTS, AFFECTED FACILITIES, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS (CONTINUED)

vii. For Roughing Mill, Emission point 67 (S-67):
This operation is vented to a baghouse (emission point #67) with a particulate emissions limitation of 0.26 pounds per hour. (Self-imposed.)

viii. For Bars Cut-Off Station 1, Emission point 68 (S-68):
This operation is vented to a baghouse (emission point #68) with a particulate emissions limitation of 0.26 pounds per hour. (Self-imposed.)

ix. For Bars Cut-Off Station 2, Emission point 69 (S-69) :
This operation is vented to a baghouse (emission point #69) with a particulate emissions limitation of 0.26 pounds per hour. (Self-imposed.)

x. For Wire Cold Rolling, Emission point 76 (S-76):
This operation is vented to a baghouse (emission point #76) with a particulate emissions limitation of 0.51 pounds per hour. (Self-imposed.)

xi. For Salt Bath, Emission point 87 (S-87):
This operation is vented to a baghouse (emission point #87) with a particulate emissions limitation of 0.019 pounds per hour. (Self-imposed.)

Compliance Demonstration: To provide reasonable assurance that the particulate matter emission limitations are being met, the permittee shall monitor the amount and type of process weight added to each emissions unit. The 3-hour average process weight shall be equal to the average hourly tons added to each emission unit averaged over 24 hours. Particulate emissions shall be calculated as follows:

$$PE = PW \times PEF$$

Where PE = Particulate emissions in lbs/hr, PW = process weight in tons/hr and PEF = EIS particulate emission factor in lbs/ton of process weight.

See the Testing requirements below.

3. Testing Requirements:

Performance tests shall be performed in accordance with methods referenced in 401 KAR 50:015, Documents incorporated by reference, for the above listed affected units to determine compliance with the appropriate pollutant limitations.

4. Specific Monitoring Requirements:

a. The permittee shall perform monthly visual inspections where:
   i. If no visible emissions are observed then no further monitoring is required.
   ii. If visible emissions are observed, the permittee shall perform a Method 9 reading.

5. Specific Record Keeping Requirements:

Records shall be maintained for each point of the visual observations, quarterly Reference Method 9 tests, the hours of operation, and the amount of process weight added to each emissions unit.

6. Specific Reporting Requirements:

Any exceedance over the opacity or particulate emission limits as stated in this permit shall be reported to the Florence Regional Office as specified in Section F.7.b. Following an exceedance, the permittee shall continue to submit, for a period of 2 months, the daily

SECTION B - EMISSION POINTS, AFFECTED FACILITIES, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS (CONTINUED)

visible emission readings and the monthly average process weight rates of this emission point, within 30 days of the end of each month. The company shall certify to the Florence Regional Office, annually, whether a daily visible emission survey was conducted for this emission point, and whether the emission point was in compliance with the applicable opacity requirements.

7. Specific Control Equipment Operating Conditions:

The fabric filters shall be operated and maintained according to manufacturer's specifications.

SECTION B - EMISSION POINTS, AFFECTED FACILITIES, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS (CONTINUED)

48 (S-48) Paved Roadways
Construction Commenced: November 1, 1999.

APPLICABLE REGULATIONS:
401 KAR 51:017, Prevention of significant deterioration of air quality

STATE-ORIGIN APPLICABLE REGULATIONS:
401 KAR 63:010 – Fugitive Emissions, applicable to each operation, or road which emits or may emit fugitive emissions provided that the fugitive emissions from such facility are not elsewhere subject to an opacity standard within the regulations of the Division for Air Quality.

1. Operating Limitations:
None.

2. Emission Limitations:
None.

3. Testing Requirements:
None

4. Specific Monitoring Requirements:
None

5. Specific Recordkeeping Requirements:
The permittee shall keep records of the dates that it vacuumed, swept, and the application of water or dust suppressants to roadways.

6. Specific Reporting Requirements:
None

7. Specific Control Equipment Operating Conditions:
The permittee shall employ a combination of the following to control fugitive dust emissions: sweeping for paved roads, watering, the use of dust suppressants, or vacuuming. (Work Practice BACT.)

SECTION B - EMISSION POINTS, AFFECTED FACILITIES, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS (CONTINUED)

59 (S-28) 2 Argon Oxygen Decarburization Preheaters (2 Standby Units)
Description:
Each natural gas fired preheaters has a maximum burner capacity of 25 MMBtu per hour, equipped with a low NOx burner to control nitrogen oxide emissions. The preheaters are vented to the AOD baghouse (emission point #58(27)). Only two AOD preheaters will be operated simultaneously with a maximum hourly capacity of 50 MMBtu per hour and annual capacity of 438,000 MMBtu per year
Construction Commenced: November 1, 1999.
Construction Commenced : September 1, 2005.

49-56 (S-49-56) 9 Ladle Preheaters (2 Standby Units)
Description:
Each natural gas fired preheaters has a maximum burner capacity of 16.8 MMBtu per hour and are equipped with a low NOx burner to control nitrogen oxide emissions. The preheaters are vented to the AOD baghouse (emission point #58(27)). Only 9 ladle preheaters will be operated simultaneously. The total maximum capacities are 147.6 MMBtu per hour and 12929.76 MMBtu per year.
Construction Commenced: November 1, 1999, and June 1, 2002.
Construction Commenced: September 1, 2005.

APPLICABLE REGULATIONS:
401 KAR 51:017, Prevention of significant deterioration of air quality

1. **Operating Limitations:**
   a) AOD preheaters:
      1. Not more than two AOD preheaters shall be operated simultaneously.
      2. Annual gas usage for AOD preheaters shall not exceed 430 MMscf per year.
   b) Ladle preheaters:
      1. Not more than 9 ladle preheaters shall be operated simultaneously.
      2. Annual gas usage for ladle preheaters shall not exceed 1268 MMscf per year.

Compliance Demonstration Method:
Records shall be kept of gas usage and number of AOD preheaters and ladle preheaters operating simultaneously.

2. **Emission Limitations:**
   See limitations for 58(27).

3. **Testing Requirements:**
   See Testing Requirements for 58(27).

4. **Specific Monitoring Requirements:**
   See Specific Monitoring Requirements for 58(27).

SECTION B - EMISSION POINTS, AFFECTED FACILITIES, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS (CONTINUED)

5. **Specific Record Keeping Requirements:**
   See Specific Record Keeping for 58(27). Record natural gas usage on a 12-month rolling basis.

6. **Specific Reporting Requirements:**
   See Specific Reporting Requirements for 58(27).

7. **Specific Control Equipment Operating Conditions:**
   See Section E.

SECTION B - EMISSION POINTS, AFFECTED FACILITIES, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS (CONTINUED)

60 (S-60) – Z-Mill #3:
Description:
This emission point consists of a reversing cold rolling mill with a maximum capacity of 100 tons of steel per hour and an annual average of 40 tons of steel per hour. The mill shall be equipped with an oil mist eliminator, with a control efficiency of 98%, to control particulate emissions.
Construction commenced – March 7, 2001.

92 (S-92) – Z-Mill #4:
Description:
A reversing cold rolling mill with a maximum capacity of 100 tons of steel per hour and an annual average of 40 tons of steel per hour. The mill shall be equipped with an oil mist eliminator, with a control efficiency of 98%, to control particulate emissions.
Construction commenced – January 1, 2004.

95 (S-95) – Z-Mill #5:
Description:
A reversing cold rolling mill with a maximum capacity of 100 tons of steel per hour and an annual average of 40 tons of steel per hour. The mill shall be equipped with an oil mist eliminator, with a control efficiency of 98%, to control particulate emissions.
Proposed construction date – February 2007.

97 (S-97) – Cold Rolling:
Description:
A cold rolling mill with a maximum capacity of 140 tons of steel per hour. The mill shall be equipped with an oil mist eliminator, with a control efficiency of 98%, to control particulate emissions.
Proposed construction date – September 2007.

APPLICABLE REGULATIONS:
401 KAR 59:010 - New process operations.
401 KAR 51:017- Prevention of significant deterioration of air quality

1. **Operating Limitations:**
   None.

2. **Emission Limitations:**
   a. Visible emissions shall not equal or exceed 20% opacity.
   b. Particulate emissions shall not exceed 6.6 tons per 12 month rolling total and 1.5 pounds per hour.
   c. VOC emissions shall not exceed 100 tons per 12 month rolling total.

SECTION B - EMISSION POINTS, AFFECTED FACILITIES, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS (CONTINUED)

Compliance Demonstration:

The particulate emissions rate shall be calculated as follows:

Particulate Emission Rate = (tons/month) [Steel processing rate (tons of steel processed/month) x Controlled Steel Particulate Emission Factor (lbs/ton of steel processed)/2000 (lbs/ton)]

The controlled steel particulate emission factor used shall be 0.0375 lbs/ton steel processed for EP-60, 92, and 95, or 0.0107 lb/ton for EP-97. These emission factors shall be replaced by the number calculated whenever an emissions test or other modification, approved by the Division, is carried out for any of these emission points.

Particulate Emission Rate = (lbs/hr) [Steel processing rate (tons of steel processed/month) x Controlled Steel Particulate Emission Factor (lbs/ton of steel processed)/(monthly hours of operation)]

The VOC emissions rate shall be calculated as follows:

VOC Emission Rate = (tons/month) [Steel processing rate (tons of steel processed/month) x Steel VOC Emission Factor (lbs/ton of steel processed)/2000 (lbs/ton)]

The VOC emission factor used shall be 0.5708 lbs/ton steel processed for EP-60, 92, and 95, and 0.163 lb/ton for EP-97. These emission factors shall be replaced by the number calculated whenever an emissions test or other modification, approved by the Division, is carried out for any of these emission points.

See monitoring requirements below.

3. Testing Requirements:

a. The permittee shall test for PM and VOC within sixty (60) days after achieving the maximum production rate at which the affected facilities will be operated but not later than 180 days after initial start-up of such facilities, the permittee shall conduct a performance demonstration on the affected facilities in accordance with 401 KAR 50:055, General compliance requirements. These performance tests must also be conducted in accordance with General Provisions G(d)7 of this permit.

b. If the weekly observations of the visible emissions from this emission point are found to be in excess of the limits prescribed above on more than two occasions in any three month period, a stack test shall be conducted to determine the emission factor used to calculate compliance with the allowable particulate emissions rate, as listed in this permit, within three months of the last exceedance. The owner or operator shall notify the Division of the performance test at least 30 days prior to the proposed test date and shall obtain approval from the Division for the procedures that will be used to determine compliance. Method 5 shall be used to determine the particulate emissions.

4. Specific Monitoring Requirements:

a. The permittee shall perform weekly visual inspections where:

SECTION B - EMISSION POINTS, AFFECTED FACILITIES, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS (CONTINUED)

i. If no visible emissions are observed then no further monitoring is required.
ii. If visible emissions are observed, the permittee shall perform a Method 9 reading.

b. The calculated particulate and VOC emissions, and steel usage shall be monitored to ensure compliance with the emissions limits listed above.

5. Specific Record Keeping Requirements:

a. Records shall be maintained of the weekly and quarterly opacity measurements as required by this permit. Records shall also be maintained of the last two opacity measurements that are in excess of the emission limits specified in this permit.
b. Records shall be maintained of the calculated particulate and VOC emission rates, the monthly steel processing rates, and the monthly hours of operation.

6. Specific Reporting Requirements:

Any exceedance in the particulate emissions rate or visible emissions standard specified in this permit shall be reported to the Division as soon as possible per General Condition F 8 of this permit. In addition, the owner or operator shall certify, annually, whether the opacity measurements were conducted continuously or intermittently, and if intermittent, the frequency of such measurements.

7. Specific Control Equipment Operating Conditions:

The mist eliminator controls used as the control equipment shall be inspected to ensure its proper operation. Inspection shall consist of a quarterly visual inspection of the inlet and outlet ducting of the controls, as well as their general condition, to determine whether they are in proper working condition. The controls shall be operated at all times that the finishing mill is in operation. The mist eliminators shall be operated and maintained according to Manufacturer's specifications.

SECTION B - EMISSION POINTS, AFFECTED FACILITIES, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS (CONTINUED)

61 (S-61) Flat Products Annealing Furnace #3

Description:

An annealing furnace with a maximum natural gas usage rate of 67.5 MMBtu/hr, and low NOx burners used to control nitrogen oxide emissions.
Construction Commenced: March 7, 2001

APPLICABLE REGULATIONS:

401 KAR 59:010 - New process operations.
401 KAR 51:017- Prevention of significant deterioration of air quality

1. Operating Limitations:

None.

2. Emission Limitations:

a) Visible emissions shall not equal or exceed 20 percent opacity [401 KAR 59:010, Section 3(2)]
b) Total particulate emissions: See Section D.
c) Total nitrogen oxide emissions: See Section D.
d) Total VOC emissions: See Section D.
e) Total carbon monoxide emissions: See Section D.

Compliance Demonstration Method:

To provide reasonable assurance that the emission limitations are being met as described in Section D, the permittee shall monitor monthly natural gas usage, and hours of operation.

The particulate emissions rate shall be calculated as follows:

Particulate Emission Rate = (tons/month): Monthly natural gas consumption rate (mmscf/month) x 1000 (mmBTU/mmscf) x Controlled PM emission factor* (lbs/mmBTU)/2000 (lbs/ton)

Particulate Emission Rate = (lbs/hr): Monthly natural gas consumption rate (mmscf/month) x 1000 (mmBTU/mmscf) x Controlled PM emission factor* (lbs/mmBTU) / (monthly hours of operation)

*The Controlled PM emission factor shall be 0.0076 lbs/mmBTU of heat input. This emission factor shall be replaced by the number calculated from an emission test or other modification, and must be approved by the Division. Records of any such change in the emission factor used shall be maintained at the source.

SECTION B - EMISSION POINTS, AFFECTED FACILITIES, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS (CONTINUED)

The Nitrogen Oxide emission rate for this emission point shall be calculated as follows:

Nitrogen Oxide Emission Rate (tons/month) = Monthly gas consumption rate (mmscf/month) x 1000 (MMBtu/mmscf) x Controlled Nitrogen Oxide Emission Factor* (lbs/MMBtu)/2000 (lbs/ton)

Nitrogen Oxide Emission Rate (lb/hr) = Monthly gas consumption rate (mmscf/month) x 1000 (MMBtu/mmscf) x Controlled Nitrogen Oxide Emission Factor* (lbs/MMBtu)/(monthly hours of operation)

*The controlled nitrogen oxide emission factor used shall be 0.06 lb/MMBtu of heat input. This emission factor shall be replaced by the number calculated whenever an emissions test or other modification, approved by the Division, is carried out for this emission point. Records of any such change in the emission factor used shall be maintained at the source.

The VOC emissions rate shall be calculated as follows:

VOC Emission Rate (tons/month) = Monthly natural gas consumption rate (mmscf/month) x 1000 (mmBTU/mmscf) x Controlled VOC emission factor* (lbs/mmBTU)/2000(lbs/ton)

VOC Emission Rate (lbs/hr) = Monthly natural gas consumption rate (mmscf/month) x 1000 (mmBTU/mmscf) x Controlled VOC emission factor* (lbs/mmBTU) / (monthly hours of operation)

*The Controlled VOC emission factor shall be 0.0055 lbs/mmBTU of heat input. This emission factor shall be replaced by the number calculated from an emission test or other modification, and must be approved by the Division. Records of any such change in the emission factor used shall be maintained at the source.

The Carbon Monoxide emissions rate shall be calculated as follows:

CO Emission Rate (tons/month) = Monthly natural gas consumption rate (mmscf/month) x 1000 (mmBTU/mmscf) x Controlled CO emission factor* (lbs/mmBTU)/2000 (lbs/ton)

CO Emission Rate (lbs/hr) = Monthly natural gas consumption rate (mmscf/month) x 1000 (mmBTU/mmscf) x Controlled CO emission factor* (lbs/mmBTU) / (monthly hours of operation)

*The Controlled CO emission factor shall be 0.084 lbs/mmBTU of heat input. This emission factor shall be replaced by the number calculated from an emission test or other modification, and must be approved by the Division. Records of any such change in the emission factor used shall be maintained at the source.

Compliance with annual limits shall be calculated as a rolling twelve month total. The rolling 12 month total shall be calculated at the beginning of each month for the previous twelve

SECTION B - EMISSION POINTS, AFFECTED FACILITIES, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS (CONTINUED)

months.

3. Testing Requirements:

The permittee shall test for PM, CO, and NOx within sixty (60) days after achieving the maximum production rate at which the affected facilities will be operated but not later than 180 days after initial start-up of such facilities, the permittee shall conduct a performance demonstration on the affected facilities in accordance with 401 KAR 50:055, General compliance requirements. These performance tests must also be conducted in accordance with General Provisions G(d)7 of this permit.

4. Specific Monitoring Requirements:

a. The permittee shall perform monthly visual inspections where:
   i. If no visible emissions are observed then no further monitoring is required.
   ii. If visible emissions are observed, the permittee shall perform a Method 9 reading.

b. The permittee shall monitor the hours of operation (per month, and 12 month rolling total), monthly natural gas usage rate, and the calculated nitrogen oxide, VOC, CO, and PM/PM10 emissions.

5. Specific Record Keeping Requirements:

The permittee shall keep records of the monthly qualitative visible emission observations and Method 9 opacity readings, the monthly natural gas usage, the calculated NOx, VOC, CO, and PM/PM10 emission rates, and the hours of operation (per month, and 12 month rolling total).

6. Specific Reporting Requirements:

Any exceedance in the emission rates or visible emissions standard as specified in this permit shall be reported to the Division as soon as possible per General Condition F 8 of this permit.

SECTION B - EMISSION POINTS, AFFECTED FACILITIES, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS (CONTINUED)

62 (S-62) AP3 Pickling

Description:

Acid pickling of stainless steel using nitric and hydrofluoric acids with a maximum processing capacity of 150 tons of stainless steel input per hour (annual average of 85 tons of stainless steel input per hour) and the use of a scrubber for 98% control of nitrogen oxides, nitric acid, and hydrofluoric acid. Construction Commenced: March 7, 2001

APPLICABLE REGULATIONS:

401 KAR 51:017- Prevention of significant deterioration of air quality

1. Operating Limitations:

None

2. Emission Limitations:

Nitrogen oxide emissions shall not exceed 100 ppm by volume, 2.55 pounds per hour and 11.17 tons per 12 month rolling total.

The nitrogen oxide emission rate for this point shall be calculated as follows:

NOx Emission Rate (lb/hr) = NO_x concentration in exit stream (in ppm by volume) x 8.01E-08 (lbs/ft^3/ppm by volume) x 318000 (ft^3/hr)

Monthly NO_x emissions rate (tons/month) = Daily NO_x emissions rate (tons/day) x days of operation per month (hrs/month)

The NO_2 concentration is the daily average concentration measured in the exit gas stream as per the monitoring requirements listed below.

3. Testing Requirements:

The permittee shall test for NOx within sixty (60) days after achieving the maximum production rate at which the affected facilities will be operated but not later than 180 days after initial start-up of such facilities, the permittee shall conduct a performance demonstration on the affected facilities in accordance with 401 KAR 50:055, General compliance requirements. These performance tests must also be conducted in accordance with General Provisions G(d)(7) of this permit.

NOx monitor shall be calibrated, operated, and maintained according to manufacturer's recommendations.

4. Specific Monitoring Requirements:

The concentration of NO_2 in the exit stream of the scrubber, as recorded by the analyzer, shall be monitored hourly.

If the NOx monitor becomes nonoperational, additional process monitoring of the control device will be required. The temperature of the reaction chamber and ammonia flow will be recorded on an hourly basis until the NOx monitoring is resumed.

SECTION B - EMISSION POINTS, AFFECTED FACILITIES, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS (CONTINUED)

5. Specific Recordkeeping Requirements:

Records of the hourly and monthly calculated NO_x emissions rates shall be maintained at the source. Records of the start and end times of operation of the pickling operation and the associated scrubber shall be maintained.

6. Specific Reporting Requirements:

Any exceedance in the NOx emissions standard specified in this permit shall be reported to the Division as soon as possible per General Condition F 8 of this permit.

7. Specific Control Equipment Operating Conditions:

a. The scrubber shall be operated at all times that the pickling unit is in operation.

b. The permittee shall monitor and record the following Scrubber operating parameters at the beginning of each shift:
   1. Flow rate of the scrubbing liquor
   2. Temperature of reaction chamber

SECTION B - EMISSION POINTS, AFFECTED FACILITIES, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS (CONTINUED)

29- 2 Tundish Preheaters (2 Standby Units)

Description:

Each natural gas fired preheater has a maximum burner capacity of 3.8 MMBtu per hour, equipped with a low NOx burner to control nitrogen oxide emissions. Only two tundish preheaters are permitted to operate simultaneously. The preheaters are vented to continuous caster baghouse (EP #32) with a combined particulate emissions limitation of 1.77 pounds per hour. (Self-imposed.)

Construction Commenced: November 1, 1999

30- 10 SEN Preheaters (5 Standby Units)

Description:

Each natural gas fired preheater has a maximum burner capacity of 0.16 MMBtu per hour, equipped with a low NOx burner to control nitrogen oxide emissions. Ten preheaters are permitted to operate simultaneously. The emissions vent to continuous caster baghouse (EP #32) with a combined particulate emissions limitation of 1.77 pounds per hour. (Self-imposed.)

Construction Commenced: November 1, 1999

113- 2 Tundish Dryers (1 Standby Unit)

Description:

Each natural gas fired dryer has a maximum burner capacity of 2.4 MMBtu per hour, equipped with a low NOx burner to control nitrogen oxide emissions. Two preheaters are permitted to operate simultaneously. The emissions vent to continuous caster baghouse (EP #32) with a combined particulate emissions limitation of 1.77 pounds per hour. (Self-imposed.)

Construction Commenced: February 2, 2006

APPLICABLE REGULATIONS:

401 KAR 51:017- Prevention of significant deterioration of air quality

1. Operating Limitations:

a) Tundish preheaters:
   1. Not more than two Tundish preheaters shall be operated simultaneously.
   2. Annual gas usage shall not exceed 65.3 MMscf per year.

b) SEN preheaters:
   1. Not more than 10 SEN preheaters shall be operated simultaneously.
   2. Annual gas usage shall not exceed 13.7 MMscf per year.

Compliance Demonstration Method:

Records shall be kept of gas usage and number of Tundish preheaters and SEN preheaters operating simultaneously.

2. Emission Limitations:

Visible emissions shall not equal or exceed 20 percent opacity, as determined by Reference Method 9, Appendix A, 40 CFR 60.

SECTION B - EMISSION POINTS, AFFECTED FACILITIES, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS (CONTINUED)

Hourly particulate emissions for each emission point as measured by Reference Method 5, Appendix A, 40 CFR 60, averaged over three hours shall not exceed 1.77 pounds per hour.

Compliance Demonstration
See requirements for emission point 32, continuous caster with torch cutting

3. Testing Requirements:
See requirements for emission point 32, continuous caster with torch cutting

4. Specific Monitoring Requirements:
See requirements for emission point 32, continuous caster with torch cutting

5. Specific Recordkeeping Requirements:
See requirements for emission point 32, continuous caster with torch cutting

6. Specific Reporting Requirements:
See requirements for emission point 32, continuous caster with torch cutting

7. Specific Control Equipment Operating Conditions:
See requirements for emission point 32, continuous caster with torch cutting

SECTION B - EMISSION POINTS, AFFECTED FACILITIES, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS (CONTINUED)

41- Cooling Tower
Description:
Construction Commenced: November 1, 1999

42- Evaporation Cooler/ Off Gas
Description:
Construction Commenced: November 1, 1999

46- Spray and Open Machine Cooling System
Description:
Construction Commenced: November 1, 1999

47- Closed Machine Cooling System
Description:
Construction Commenced: November 1, 1999

63 – AP Cold #3 Cooling Tower
Description:
Construction Commenced: March 7, 2001

64 – Z-Mill #3- Cooling Tower
Description:
Construction Commenced: March 7, 2001

80 – Long Products AP Cold #2 Cooling Tower #1
Description:
Construction Commenced: March 15, 2002

81 – Long Products Reheat & Roughing Cooling Tower
Description:
Construction Commenced: March 15, 2002

82 – Long Products Rolling & Miscellaneous Cooling Tower
Description:
Construction Commenced: March 15, 2002

93– Z-Mill #4- Cooling Tower
Description:
Construction Commenced: January 1, 2004.

94– Z-Mill #5- Cooling Tower
Description:
Proposed Construction Date: February 2, 2006.

SECTION B - EMISSION POINTS, AFFECTED FACILITIES, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS (CONTINUED)

96– Tandem Rolling - Cooling Tower
Description:
Proposed Construction Date: February 2, 2006.

98– Cold Mill Miscellaneous - Cooling Tower
Description:
Proposed Construction Date: February 2, 2006.

100 – AP Cold #4 Cooling Tower
Description:
Construction Commenced: September 9, 2005

107– EAF #2 Cooling Tower
Description:
Construction Commenced: August 1, 2005.

108– Melt Shop #2 Cooling Tower
Description:
Proposed Construction Date: March 1, 2007.

Control Device for Cooling Towers: Drift Eliminators (BACT)

APPLICABLE REGULATIONS:
401 KAR 51:017- Prevention of significant deterioration of air quality
401 KAR 63:010 – Fugitive Emissions.

1. **Operating Limitations:**
   No person shall cause, suffer, or allow any material to be handled, processed, transported, or stored without taking reasonable precaution to prevent particulate matter from becoming airborne. Reasonable precautions are specified in 401 KAR 63:010, Section 3.

2. **Emission Limitations:**
   None.

3. **Testing Requirements:**
   None.

4. **Specific Monitoring Requirements:**
   North American Stainless shall monitor any maintenance, repairs and actions taken to prevent emissions.

5. **Specific Record Keeping Requirements:**
   North American Stainless shall keep records of any maintenance, repairs and actions taken to prevent emissions.

6. **Specific Reporting Requirements:** See Section F.6

SECTION B - EMISSION POINTS, AFFECTED FACILITIES, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS (CONTINUED)

7. **Specific Control Equipment Operating Conditions:**

The drift eliminators shall be operated all the time when the cooling towers are in operation. The drift eliminators shall be operated and maintained according to manufacturer's specifications.

SECTION B - EMISSION POINTS, AFFECTED FACILITIES, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS (CONTINUED)

37- Sludge Disposal

38- Scrap Unloading

117- Refractory Brick Dumping

APPLICABLE REGULATIONS:
401 KAR 51:017- Prevention of significant deterioration of air quality
401 KAR 63:010 – Fugitive Emissions.

1. Operating Limitations:
No person shall cause, suffer, or allow any material to be handled, processed, transported, or stored without taking reasonable precaution to prevent particulate matter from becoming airborne. Reasonable precautions are specified in 401 KAR 63:010, Section 3.

2. Emission Limitations:
Particulate emissions shall not exceed the limitation as required below:

a. Sludge Disposal: Particulate emissions shall not exceed 2.67E-03 pounds per hour.
b. Scrap Unloading: Particulate emissions shall not exceed 8.29E-02 pounds per hour based on a 90% capacity.
c. Refractory Brick Dumping: Particulate emissions shall not exceed 0.115 pounds per hour based on a 90% capacity.

3. Testing Requirements:
None.

4. Specific Monitoring Requirements:
North American Stainless shall monitor any maintenance, repairs and actions taken to prevent emissions.

5. Specific Record Keeping Requirements:
North American Stainless shall keep records of any maintenance, repairs and actions taken to prevent emissions.

6. Specific Reporting Requirements:
See Section F.6

7. Specific Control Equipment Operating Conditions:
None.

SECTION B - EMISSION POINTS, AFFECTED FACILITIES, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS (CONTINUED)

66 (S-66) – Long Products Reheat furnace:
Description:
A reheat furnace with a low NO_x burners used to control nitrogen oxide emissions has a maximum natural gas usage rate of 75 MMBtu/hr.
Construction commenced – March 15, 2002.

APPLICABLE REGULATIONS:
401 KAR 51:017- Prevention of significant deterioration of air quality
401 KAR 59:010 – New process operations

1. Operating Limitations:

None

2. Emission Limitations:

a. Visible emissions shall not equal or exceed 20 percent opacity [401 KAR 59:010, Section 3(2)]
b. Hourly particulate emissions, as measured by Reference Method 5, Appendix A, 40 CFR 60, averaged over three hours shall not exceed 0.56 pounds per hour and 2.5 tons per 12 month rolling period - BACT limit.[401 KAR 51:017]
c. Total nitrogen oxide emissions shall not exceed 5.625 pounds per hour, and 24.64 tons per 12 month rolling peroid - BACT limit.[401 KAR 51:017]
d. VOC emissions shall not exceed 0.40 pounds per hour and 1.77 tons per year - BACT limit.[401 KAR 51:017]
e. Total carbon monoxide emissions shall not exceed 6.18 pounds per hour and 27.05 tons per 12 month rolling average - BACT limit.[401 KAR 51:017]

Compliance Demonstration Method:
To provide reasonable assurance that the emission limitations are being met, the permittee shall monitor monthly natural gas usage rates and monthly hours of operation.

The particulate emissions rate shall be calculated as follows:
Particulate Emission Rate = (tons/month) Monthly gas consumption rate (mmscf/month) x 1000 (MMBtu/mmscf) x Controlled Particulate Emission Factor* (lbs/MMBtu)/2000 (lbs/ton)

Particulate Emission Rate = (lbs/hr) Monthly gas consumption rate (mmscf/month) x 1000 (MMBtu/mmscf) x Controlled particulate emission factor* (lbs/MMBtu)/(monthly hours of operation)

*The controlled particulate emission factor used shall be 0.0075 lbs/MMBtu. This emission factor shall be replaced by the number calculated from an emission test or other modification, and must be approved by the Division. Records of any such change in the emission factor used shall be maintained at the source.

SECTION B - EMISSION POINTS, AFFECTED FACILITIES, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS (CONTINUED)

The nitrogen oxide emission rate shall be calculated as follows:

Nitrogen Oxide Emission Rate (tons/month) = Monthly gas consumption rate (mmscf/month) x 1000 (MMBtu/mmscf) x Controlled nitrogen oxide emission* factor (lbs/MMBtu)/2000 (lbs/ton)

Nitrogen Oxide Emission Rate (lbs/hr) = Monthly gas consumption rate (mmscf/month) x 1000 (MMBtu/mmscf) x Controlled nitrogen oxide emission* factor (lbs/MMBtu)/(monthly hours of operation)

*The controlled nitrogen oxide emission factor used shall be 0.075 lbs/MMBtu. This emission factor shall be replaced by the number calculated from an emission test or other modification, and must be approved by the Division. Records of any such change in the emission factor used shall be maintained at the source.

The VOC emissions rate shall be calculated as follows:

VOC Emission Rate (tons/month) = Monthly gas consumption rate (mmscf/month) x 1000 (MMBtu/mmscf) x Controlled VOC emission factor (lbs/MMBtu)*/ 2000 (lbs/ton)

VOC Emission Rate (lbs/hr) = Monthly gas consumption rate (mmscf/month) x 1000 (MMBtu/mmscf) x Controlled VOC emission factor (lbs/MMBtu)*/ (monthly hours of operation)

*The controlled VOC emission factor used shall be 0.0054 lbs/MMBtu. This emission factor shall be replaced by the number calculated from an emission test or other modification, and must be approved by the Division. Records of any such change in the emission factor used shall be maintained at the source.

The carbon monoxide emissions rate shall be calculated as follows:

Carbon Monoxide Emission Rate (tons/month) = Monthly gas consumption rate (mmscf/month) x 1000 (MMBtu/mmscf)x Controlled carbon monoxide emission factor* (lbs/MMBtu)/2000 (lbs/ton)

Carbon Monoxide Emission Rate (lbs/hr) = Monthly gas consumption rate (mmscf/month) x 1000 (MMBtu/mmscf) x Controlled carbon monoxide emission factor* (lbs/MMBtu)/(monthly hours of operation)

*The controlled carbon monoxide emission factor used shall be 0.0824 lbs/MMBtu. This emission factor shall be replaced by the number calculated from an emission test or other modification, and must be approved by the Division. Records of any such change in the emission factor used shall be maintained at the source.

3. Testing Requirements:

The permittee shall test for PM, CO, and NOx within sixty (60) days after achieving the maximum production rate at which the affected facilities will be operated but not later than 180 days after initial start-up of such facilities, the permittee shall conduct a performance demonstration on the affected facilities in accordance with 401 KAR 50:055, General compliance requirements. These performance tests must also be conducted in accordance with General Provisions G(d)7 of this permit.

SECTION B - EMISSION POINTS, AFFECTED FACILITIES, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS (CONTINUED)

4. **Specific Monitoring Requirements:**

a. The permittee shall perform monthly visual inspections where:
   i. If no visible emissions are observed then no further monitoring is required.
   ii. If visible emissions are observed, the permittee shall perform a Method 9 reading.

b. The permittee shall monitor the hours of operation, monthly natural gas usage rate, and the calculated nitrogen oxide, VOC, CO, and PM/PM10 emissions (per month, and 12 month rolling period).

5. **Specific Record Keeping Requirements**:

The permittee shall keep records of the monthly qualitative visible emission observations and Method 9 opacity readings, the monthly natural gas usage, the calculated NOx, CO, VOC, and PM/PM10 emission rates (per month, and 12 month rolling total), and the monthly hours of operation.

6. **Specific Reporting Requirements:**

Any exceedance of the emission rates or visible emission standards as stated in this permit shall be reported to the Division as soon as possible per General Condition F 8 of this permit

SECTION B - EMISSION POINTS, AFFECTED FACILITIES, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS (CONTINUED)

70 (S-70)- **Long Products Annealing Furnace #1**
Description:
A long products Annealing Furnace #1 with a maximum natural gas usage rate of 40 MMBtu/hr, and low NOx burners used to control nitrogen oxide emissions.
Construction Commenced: March 15, 2002.

71 (S-71) - **Long Products Annealing Furnace #2**
Description
A long products annealing #2 furnace with a maximum natural gas usage rate of 40 MMBtu/hr, and low NOx burners used to control nitrogen oxide emissions.
Construction to Commence: January 2007.

APPLICABLE REGULATIONS:
401 KAR 51:017- Prevention of significant deterioration of air quality
401 KAR 59:010 – New process operations

1. **Operating Limitations:**
   None.

2. **Emission Limitations:**
   a. Visible emissions shall not equal or exceed 20 percent opacity [401 KAR 59:010, Section 3(2)]
   b. Hourly particulate emissions, as measured by Reference Method 5, Appendix A, 40 CFR 60, averaged over three hours shall not exceed 0.30 pounds per hour and 1.31 tons per 12 month rolling total - BACT limit.[401 KAR 51:017]
   c. Total nitrogen oxide emissions shall not exceed 3.00 pounds per hour, and 13.14 tons per 12 month rolling period - BACT limit.[401 KAR 51:017]
   d. VOC emissions shall not exceed 0.22 pounds per hour and 0.94 tons per year - BACT limit.[401 KAR 51:017]
   e. Total carbon monoxide emissions shall not exceed 3.29 pounds per hour and 17.18 tons per year - BACT limit.[401 KAR 51:017]

   Compliance Demonstration Method:
   To provide reasonable assurance that the emission limitations are being met, the permittee shall monitor monthly natural gas usage rates, and monthly hours of operation.

   The particulate emissions rate shall be calculated as follows:
   Particulate Emission Rate = (tons/month) Monthly gas consumption rate (mmscf/month) x 1000 (MMBtu/mmscf) x Controlled Particulate Emission Factor* (lbs/MMBtu)/2000 (lbs/ton)
   Particulate Emission Rate = (lbs/hr) Monthly gas consumption rate (mmscf/month) x 1000 (MMBtu/mmscf) x Controlled particulate emission factor* (lbs/MMBtu)/(monthly hours of operation)
   *The controlled particulate emission factor used shall be 0.0075 lbs/MMBtu. This emission factor shall be replaced by the number calculated from an emission test or other modification, and must be approved by the Division. Records of any such change in the

SECTION B - EMISSION POINTS, AFFECTED FACILITIES, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS (CONTINUED)

emission factor used shall be maintained at the source.

The nitrogen oxide emission rate shall be calculated as follows:

Nitrogen Oxide Emission Rate (tons/month) = Monthly gas consumption rate (mmscf/month) x 1000 (MMBtu/mmscf) x Controlled nitrogen oxide emission* factor (lbs/MMBtu)/2000 (lbs/ton)

Nitrogen Oxide Emission Rate (lbs/hr) = Monthly gas consumption rate (mmscf/month) x 1000 (MMBtu/mmscf) x Controlled nitrogen oxide emission* factor (lbs/MMBtu)/(monthly hours of operation)

*The controlled nitrogen oxide emission factor used shall be 0.075 lbs/MMBtu. This emission factor shall be replaced by the number calculated from an emission test or other modification, and must be approved by the Division. Records of any such change in the emission factor used shall be maintained at the source.

The VOC emissions rate shall be calculated as follows:

VOC Emission Rate (tons/month) = Monthly gas consumption rate (mmscf/month) x 1000 (MMBtu/mmscf) x Controlled VOC emission factor* (lbs/MMBtu)/ 2000 (lbs/ton)

VOC Emission Rate (lbs/hr) = Monthly gas consumption rate (mmscf/month) x 1000 (MMBtu/mmscf) x Controlled VOC emission factor* (lbs/MMBtu)/ (monthly hours of operation)

*The controlled VOC emission factor used shall be 0.0054 lbs/MMBtu. This emission factor shall be replaced by the number calculated from an emission test or other modification, and must be approved by the Division. Records of any such change in the emission factor used shall be maintained at the source.

The carbon monoxide emissions rate shall be calculated as follows:

Carbon Monoxide Emission Rate (tons/month) = Monthly gas consumption rate (mmscf/month) x 1000 (MMBtu/mmscf) x Controlled carbon monoxide emission factor* (lbs/MMBtu)/2000 (lbs/ton)

Carbon Monoxide Emission Rate (lbs/hr) = Monthly gas consumption rate (mmscf/month) x 1000 (MMBtu/mmscf)x Controlled carbon monoxide emission factor* (lbs/MMBtu)/(monthly hours of operation)

*The controlled carbon monoxide emission factor used shall be 0.0824 lbs/MMBtu. This emission factor shall be replaced by the number calculated from an emission test or other modification, and must be approved by the Division. Records of any such change in the emission factor used shall be maintained at the source.

3. Testing Requirements:

The permittee shall test for PM, CO, and NOx within sixty (60) days after achieving the maximum production rate at which the affected facilities will be operated but not later than 180 days after initial start-up of such facilities, the permittee shall conduct a performance demonstration on the affected facilities in accordance with 401 KAR 50:055, General compliance requirements. VOC emissions shall be tested for furnace#2 (EP71) after it is

SECTION B - EMISSION POINTS, AFFECTED FACILITIES, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS (CONTINUED)

constructed. VOC testing of existing furnace must be completed within 180 days of KDAQ's request. These performance tests must also be conducted in accordance with General Provisions G(d)7 of this permit.

4. Specific Monitoring Requirements:

a. The permittee shall perform monthly visual inspections where:
   i. If no visible emissions are observed then no further monitoring is required.
   ii. If visible emissions are observed, the permittee shall perform a Method 9 reading.

b. The permittee shall monitor the hours of operation, monthly natural gas usage rate, and the calculated nitrogen oxide, VOC, CO, and PM/PM10 emissions (per month, and 12 month rolling period).

5. Specific Record Keeping Requirements:

The permittee shall keep records of the monthly qualitative visible emission observations and Method 9 opacity readings, the monthly natural gas usage, the calculated NOx, CO, VOC, and PM/PM10 emission rates (per month, and 12 month rolling period), and the monthly hours of operation

6. Specific Reporting Requirements:

Any exceedance in the emissions rates or visible emissions standards as specified in this permit shall be reported to the Division as soon as possible per General Condition F 8 of this permit.

SECTION B - EMISSION POINTS, AFFECTED FACILITIES, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS (CONTINUED)

74 (S-74) – Long Products Pickling Line 1:
Description:
Acid pickling of steel long products using nitric and hydrofluoric acids with a maximum processing capacity of 75 tons of steel per hour and an annual average of 35 tons of steel input per hour. The acid pickling shall be equipped with a scrubber for 98% control of nitrogen oxides, nitric acid, and hydrofluoric acid.
Construction commenced – March 15, 2002.

75 (S-75) - Long Products Pickling Line 2:
Description:
Acid pickling of steel long products using nitric and hydrofluoric acids with a maximum processing capacity of 75 tons of steel per hour and an annual average of 35 tons of steel input per hour. The acid pickling shall be equipped with a scrubber for 98% control of nitrogen oxides, nitric acid, and hydrofluoric acid. Construction to commence – February, 2007.

APPLICABLE REGULATIONS:
401 KAR 51:017 – Prevention of significant deterioration of air quality

1. Operating Limitations:
None

2. Emission Limitations:
Nitrogen oxide emissions shall not exceed 100 ppm by volume, 9.61 pounds per hour and 42.10 tons per 12 month rolling total - BACT limit.[401 KAR 51:017]

The nitrogen oxide emission rate for this point shall be calculated as follows:
NOx Emission Rate (lb/hr) = NO_x concentration in exit stream (ppm by volume) x 8.01E-08 (lbs/ft^3/ppm by volume) x 1,200,000 (ft^3/hr)

Monthly NO_x emissions rate (tons/month) = [hourly NO_x emissions rate (lb/hr) x daily operational hours (hrs/day)/2000 (lbs/ton)] x days of operation per month (days/month)

The NO_2 concentration is the daily average concentration measured in the exit gas stream as per the monitoring requirements listed below.

Rolling twelve month total compliance: The monthly NOx emission rate, as calculated above, shall be used to demonstrate compliance with the rolling twelve month total limit.

SECTION B - EMISSION POINTS, AFFECTED FACILITIES, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS (CONTINUED)

3. Testing Requirements:

The permittee shall test for NOx within sixty (60) days after achieving the maximum production rate at which the affected facilities will be operated but not later than 180 days after initial start-up of such facilities, the permittee shall conduct a performance demonstration on the affected facilities in accordance with 401 KAR 50:055, General compliance requirements. These performance tests must also be conducted in accordance with General Provisions G(d)7 of this permit.

NOx monitor shall be calibrated, operated, and maintained according to manufacturer's recommendations.

4. Specific Monitoring Requirements:

The concentration of NO_2 in the exit stream of the scrubber, as recorded by the analyzers, shall be monitored hourly.

If the NOx monitor becomes nonoperational, additional process monitoring of the control device will be required. The pH of scrubbing liquor and pressure drop across scrubber will be recorded hourly until the hourly NOx monitoring is resumed.

5. Specific Recordkeeping Requirements:

Records of the hourly and monthly calculated NO_x emissions rates shall be maintained at the source. Records of the start and end times of operation of the pickling operation and the associated scrubber shall be maintained.

6. Specific Reporting Requirements:

Reports of any exceedance of the emission limitations listed above shall be submitted to the Division as soon as possible per General Condition F8 of this permit.

7. Specific Control Equipment Operating Conditions:

a. The scrubber shall be operated at all times that the pickling unit is in operation.

b. The permittee shall monitor and record the following Scrubber operating parameters at least once per shift:
   1. pH of the scrubbing liquor
   2. Pressure Drop across the scrubber

SECTION B - EMISSION POINTS, AFFECTED FACILITIES, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS (CONTINUED)

78 (78) – Angle Pickling Line 1 :
Description:
Acid pickling of steel angles using nitric and hydrofluoric acids with a maximum processing capacity of 40 tons of steel per hour and an annual average of 17.5 tons of steel input per hour. The acid pickling operation shall be equipped with a scrubber to control of nitrogen oxides, nitric acid, and hydrofluoric acid.
Construction commenced – March 15, 2002.

114 (S-114) – Angle Pickling Line 2:
Description:
Acid pickling of steel angles using nitric and hydrofluoric acids with a maximum processing capacity of 40 tons of steel per hour and an annual average of 17.5 tons of steel input per hour. The acid pickling operation shall be equipped with a scrubber to control of nitrogen oxides, nitric acid, and hydrofluoric acid.
Construction to commence – March 3, 2007

APPLICABLE REGULATIONS:
401 KAR 51:017 – Prevention of significant deterioration of air quality

1. Operating Limitations:
None

2. Emission Limitations:
Nitrogen oxide emissions shall not exceed 75 PPM by volume, 1.08 pounds per hour and 6.32 tons per 12 month rolling total - BACT limit.[401 KAR 51:017]

The nitrogen oxide emission rate for this point shall be calculated as follows:
NOx Emission Rate (lb/hr) = NO_x concentration in exit stream (in ppm by volume) x 8.01E-08 (lbs/ft^3/ppm by volume) x 180000 (ft^3/hr)

Monthly NO_x emissions rate (tons/month) = [hourly NO_x emissions rate (lb/hr) x daily operational hours (hrs/day)/2000 (lbs/ton)] x days of operation per month (days/month)

The NO_2 concentration is the daily average concentration measured in the exit gas stream as per the monitoring requirements listed below.

Rolling twelve month total compliance: The monthly NOx emission rate, as calculated above, shall be used to demonstrate compliance with the rolling twelve month total limit.

SECTION B - EMISSION POINTS, AFFECTED FACILITIES, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS (CONTINUED)

3. Testing Requirements:

The permittee shall test for NOx within sixty (60) days after achieving the maximum production rate at which the affected facilities will be operated but not later than 180 days after initial start-up of such facilities, the permittee shall conduct a performance demonstration on the affected facilities in accordance with 401 KAR 50:055, General compliance requirements. These performance tests must also be conducted in accordance with General Provisions G(d)7 of this permit.

NOx monitor shall be calibrated, operated, and maintained according to manufacturer's recommendations.

4. Specific Monitoring Requirements:

The concentration of NOx in the exit stream of the scrubber, as recorded by the analyzers, shall be monitored hourly.

If the NOx monitor becomes nonoperational, additional process monitoring of the control equipment will be required. The pH and pressure drop across the scrubber will be recorded on an hourly basis until the hourly NOx monitoring is resumed.

5. Specific Recordkeeping Requirements:

Records of hourly and monthly calculated NOx emission rates shall be maintained at the source. Records of the start and end times of operation of the pickling operation and the associated scrubber will be maintained..

6. Specific Reporting Requirements:

Records of any exceedance of the emission limitations listed above shall be submitted to the Division as soon as possible per General Condition F8 of this permit.

7. Specific Control Equipment Operating Conditions:

a. The scrubber shall be operated at all times that the pickling unit is in operation.

b. The permittee shall monitor and record the following Scrubber operating parameters at least once per shift:
   1. pH of the scrubbing liquor
   2. Pressure Drop across the scrubber

SECTION B - EMISSION POINTS, AFFECTED FACILITIES, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS (CONTINUED)

83 (S-83) Natural Gas Dryers

Description

Two natural-gas dryers have combined maximum burner capacity of 3.1 MMBtu/hr, equipped with low NOx burners to control nitrogen oxide emissions.
Construction Commenced: March 15, 2002

APPLICABLE REGULATIONS:

401 KAR 51:017- Prevention of significant deterioration
401 KAR 59:010 – New process operations

1. Operating Limitations:

None.

2. Emission Limitations:

a. Visible emissions shall not equal or exceed 20 percent opacity [401 KAR 59:010, Section 3(2)]
b. Hourly particulate emissions, as measured by Reference Method 5, Appendix A, 40 CFR 60, averaged over three hours shall not exceed 0.023 pounds per hour and 0.1 tons per 12 month rolling total - BACT limit.[401 KAR 51:017]
c. Total nitrogen oxide emissions shall not exceed 0.304 pounds per hour, , and 1.33 tons per 12 month rolling total - BACT limit. [401 KAR 51:017]
d. VOC emissions shall not exceed 0.0167 pounds per hour and 0.07 tons per 12 month rolling total - BACT limit. [401 KAR 51:017]
e. Total carbon monoxide emissions shall not exceed 0.255 pounds per hour and 1.12 tons per 12 month rolling total - BACT limit. [401 KAR 51:017]

Compliance Demonstration Method:

To provide reasonable assurance that the emission limitations are being met, the permittee shall monitor monthly natural gas usage rates, and monthly hours of operation.

The particulate emissions rate shall be calculated as follows:

Particulate Emission Rate (tons/month) = Monthly gas consumption rate (mmscf/month) x 1000 (MMBtu/mmscf) x Controlled Particulate Emission Factor* (lbs/MMBtu)/2000 (lbs/ton)

Particulate Emission Rate (lbs/hr) = Monthly gas consumption rate (mmscf/month) x 1000 (MMBtu/mmscf) x Controlled particulate emission factor* (lbs/MMBtu)/(monthly hours of operation)

*The controlled particulate emission factor used shall be 0.0075 lbs/MMBtu. This emission factor shall be replaced by the number calculated from an emission test or other modification, and must be approved by the Division. Records of any such change in the emission factor used shall be maintained at the source.

SECTION B - EMISSION POINTS, AFFECTED FACILITIES, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS (CONTINUED)

The nitrogen oxide emission rate shall be calculated as follows:

Nitrogen Oxide Emission Rate (tons/month) = Monthly gas consumption rate (mmscf/month) x 1000 (MMBtu/mmscf) x Controlled nitrogen oxide emission factor* (lbs/MMBtu)/2000 (lbs/ton)

Nitrogen Oxide Emission Rate (lbs/hr) = Monthly gas consumption rate (mmscf/month) x 1000 (MMBtu/mmscf) x Controlled nitrogen oxide emission factor* (lbs/MMBtu)/(monthly hours of operation)

*The controlled nitrogen oxide emission factor used shall be 0.098 lbs/MMBtu. This emission factor shall be replaced by the number calculated from an emission test or other modification, and must be approved by the Division. Records of any such change in the emission factor used shall be maintained at the source.

The VOC emissions rate shall be calculated as follows:

VOC Emission Rate (tons/month) = Monthly gas consumption rate (mmscf/month) x 1000 (MMBtu/mmscf)x Controlled VOC emission factor* (lbs/MMBtu)/ 2000 (lbs/ton)

VOC Emission Rate (lbs/hr) = Monthly gas consumption rate (in mmscf/month) x 1000 (MMBtu/mmscf) x Controlled VOC emission factor* (lbs/MMBtu)/ (monthly hours of operation)

*The controlled VOC emission factor used shall be 0.0054 lbs/MMBtu. This emission factor shall be replaced by the number calculated from an emission test or other modification, and must be approved by the Division. Records of any such change in the emission factor used shall be maintained at the source.

The carbon monoxide emissions rate shall be calculated as follows:

Carbon Monoxide Emission Rate (tons/month) = Monthly gas consumption rate (mmscf/month) x 1000 (MMBtu/mmscf) x Controlled carbon monoxide emission factor* (lbs/MMBtu)/2000

Carbon Monoxide Emission Rate (lbs/hr) = Monthly gas consumption rate (mmscf/month) x 1000 (MMBtu/mmscf) x Controlled carbon monoxide emission factor* (lbs/MMBtu)/(monthly hours of operation)

*The controlled carbon monoxide emission factor used shall be 0.0824 lbs/MMBtu. This emission factor shall be replaced by the number calculated from an emission test or other modification, and must be approved by the Division. Records of any such change in the emission factor used shall be maintained at the source.

3. Testing Requirements:

None.

4. Specific Monitoring Requirements:

a. The permittee shall perform monthly visual inspections where:

i. If no visible emissions are observed then no further monitoring is required.

ii. If visible emissions are observed, the permittee shall perform a Method 9 reading.

SECTION B - EMISSION POINTS, AFFECTED FACILITIES, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS (CONTINUED)

b. The permittee shall monitor the hours of operation, monthly natural gas usage rate, and the calculated nitrogen oxide, VOC, CO, and PM/PM10 emissions (per month, and 12 month rolling period).

5. Specific Record Keeping Requirements:

The permittee shall keep records of the monthly qualitative visible emission observations and Method 9 opacity readings, the monthly natural gas usage, the calculated NOx, CO, VOC, and PM/PM10 emission rates (per month, and 12 month rolling total), and the monthly hours of operation.

6. Specific Reporting Requirements:

Any exceedance in the emissions rates or visible emissions standards as specified in this permit shall be reported to the Division as soon as possible per General Condition F 8 of this permit.

SECTION B - EMISSION POINTS, AFFECTED FACILITIES, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS (CONTINUED)

84 (S-84) Salt Bath Heaters

Description

Two natural-gas dryers have combined maximum burner capacity of 5.6 MMBtu/hr, equipped with low NOx burners to control nitrogen oxide emissions.
Construction Commenced: March 15, 2002

APPLICABLE REGULATIONS:

401 KAR 59:010 - New process operations
401 KAR 51:017- Prevention of significant deterioration of air quality

1. Operating Limitations:

None.

2. Emission Limitations:

a. Visible emissions shall not equal or exceed 20 percent opacity [401 KAR 59:010, Section 3(2)]

b. Hourly particulate emissions, as measured by Reference Method 5, Appendix A, 40 CFR 60, averaged over three hours shall not exceed 0.0417 pounds per hour and 0.18 tons per 12 month rolling total- BACT limit.[401 KAR 51:017]

c. Total nitrogen oxide emissions shall not exceed 0.55 pounds per hour, and 2.40 tons per 12 month rolling total- BACT limit. [401 KAR 51:017]

d. VOC emissions shall not exceed 0.03 pounds per hour and 0.13 tons per 12 month rolling total - BACT limit. [401 KAR 51:017]

e. Total carbon monoxide emissions shall not exceed 0.46 pounds per hour and 2.02 tons per 12 month rolling total - BACT limit. [401 KAR 51:017]

Compliance Demonstration Method:

To provide reasonable assurance that the emission limitations are being met, the permittee shall monitor monthly natural gas usage rates, and monthly hours of operation.

The particulate emissions rate shall be calculated as follows:

Particulate Emission Rate (tons/month) = Monthly gas consumption rate (mmscf/month) x 1000 (MMBtu/mmscf) x Controlled Particulate Emission Factor* (lbs/MMBtu)/2000 (lbs/ton)

Particulate Emission Rate (lbs/hr) = Monthly gas consumption rate (mmscf/month) x 1000 (MMBtu/mmscf) x Controlled particulate emission factor* (lbs/MMBtu)/(monthly hours of operation)

*The controlled particulate emission factor used shall be 0.0075 lbs/MMBtu. This emission factor shall be replaced by the number calculated from an emission test or other modification, and must be approved by the Division. Records of any such change in the emission factor used shall be maintained at the source.

SECTION B - EMISSION POINTS, AFFECTED FACILITIES, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS (CONTINUED)

The nitrogen oxide emission rate shall be calculated as follows:

Nitrogen Oxide Emission Rate (tons/month) = Monthly gas consumption rate (mmscf/month) x 1000 (MMBtu/mmscf) x Controlled nitrogen oxide emission factor* (lbs/MMBtu)/2000 (lbs/ton)

Nitrogen Oxide Emission Rate (lbs/hr) = Monthly gas consumption rate (mmscf/month) x 1000 (MMBtu/mmscf) x Controlled nitrogen oxide emission factor* (lbs/MMBtu)/(monthly hours of operation)

*The controlled nitrogen oxide emission factor used shall be 0.098 lbs/MMBtu. This emission factor shall be replaced by the number calculated from an emission test or other modification, and must be approved by the Division. Records of any such change in the emission factor used shall be maintained at the source.

The VOC emissions rate shall be calculated as follows:

VOC Emission Rate (tons/month) = Monthly gas consumption rate (mmscf/month) x 1000 (MMBtu/mmscf)x Controlled VOC emission factor* (lbs/MMBtu)/ 2000(lbs/ton)

VOC Emission Rate (lbs/hr) = Monthly gas consumption rate (mmscf/month) x 1000 (MMBtu/mmscf) x Controlled VOC emission factor* (lbs/MMBtu)/(monthly hours of operation)

*The controlled VOC emission factor used shall be 0.0054 lbs/MMBtu. This emission factor shall be replaced by the number calculated from an emission test or other modification, and must be approved by the Division. Records of any such change in the emission factor used shall be maintained at the source.

The carbon monoxide emissions rate shall be calculated as follows:

Carbon Monoxide Emission Rate (tons/month) = Monthly gas consumption rate (mmscf/month) x 1000 (MMBtu/mmscf) x Controlled carbon monoxide emission factor* (lbs/MMBtu)/2000(lbs/ton)

Carbon Monoxide Emission Rate (lbs/hr) = Monthly gas consumption rate (mmscf/month) x 1000 (MMBtu/mmscf) x Controlled carbon monoxide emission factor* (lbs/MMBtu)/(monthly hours of operation)

*The controlled carbon monoxide emission factor used shall be 0.0824 lbs/MMBtu. This emission factor shall be replaced by the number calculated from an emission test or other modification, and must be approved by the Division. Records of any such change in the emission factor used shall be maintained at the source.

3. Testing Requirements:

None.

4. Specific Monitoring Requirements:

a. The permittee shall perform monthly visual inspections where:

i. If no visible emissions are observed then no further monitoring is required.

ii. If visible emissions are observed, the permittee shall perform a Method 9 reading.

SECTION B - EMISSION POINTS, AFFECTED FACILITIES, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS (CONTINUED)

b. The permittee shall monitor the hours of operation, natural gas usage rate, and the calculated nitrogen oxide, CO, VOC, and PM/PM10 emissions (per month, and 12 month rolling total) .

5. Specific Record Keeping Requirements:

The permittee shall keep records of the monthly qualitative visible emission observations and Method 9 opacity readings, the monthly natural gas usage, the calculated NOx, CO, VOC, and PM/PM10 emission rates (per month, and 12 month rolling total), and the monthly hours of operation

6. Specific Reporting Requirements:

Any exceedance in the emissions rates or visible emissions standard as specified in this permit shall be reported to the Division as soon as possible per General Condition F 8 of this permit.

SECTION B - EMISSION POINTS, AFFECTED FACILITIES, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS (CONTINUED)

99 (S-99) - Coil Polishing:
Description:
A coil grinder with a maximum capacity of 30 tons of steel per hour having a mist collector to control particulate emissions with an efficiency of 99%.
Construction Commenced – February 2006.

APPLICABLE REGULATIONS:
401 KAR 59:010 - New process operations.
401 KAR 51:017 – Prevention of significant deterioration.

1. Operating Limitations:
Mist eliminators shall be operated at all the times with coil polishing operation (BACT).

2. Emission Limitations:
Particulate emissions shall not exceed 1.5 lb per hour and 6.6 tons per 12-month rolling total.
Visible emissions shall not equal or exceed 20% opacity.

The particulate emissions rate shall be calculated as follows:

Particulate Emission Rate = (tons/month)	Steel processing rate (tons of steel processed/month) x Controlled Particulate Emission Factor (lbs/ton of steel processed) / 2000 (lbs/ton)

The controlled particulate emission factor used shall be 0.05 lbs/ton steel processed. This emission factor shall be replaced by the number calculated whenever an emissions test or other modification, approved by the Division, is carried out for this emission point.

3. Testing Requirements:
If the weekly observations of the visible emissions from this emission point are found to be in excess of the limits prescribed above on more than two occasions in any three month period, a stack test shall be conducted to determine the emission factor used to calculate compliance with the allowable particulate emissions rate, as listed in this permit, within three months of the last exceedance. The owner or operator shall notify the Division of the performance test at least 30 days prior to the proposed test date and shall obtain approval from the Division for the procedures that will be used to determine compliance. Method 5 shall be used to determine the particulate emissions.

4. Specific Monitoring Requirements:
a. The permittee shall perform weekly visual inspections where:
   i. If no visible emissions are observed then no further monitoring is required.
   ii. If visible emissions are observed, the permittee shall perform a Method 9 reading.

b. The calculated particulate emissions, and steel usage shall be monitored to ensure compliance with the emissions limits listed above.

SECTION B - EMISSION POINTS, AFFECTED FACILITIES, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS (CONTINUED)

5. Specific Record Keeping Requirements:

a. Records shall be maintained of the weekly and quarterly opacity measurements as required by this permit. Records shall also be maintained of the last two opacity measurements that are in excess of the emission limits specified in this permit, including the date and time of the exceedance.

b. Records of the calculated particulate emissions rate, steel processing rate, and hours of operation of this unit shall be maintained at the source. In addition, a log of the control equipment inspection shall be maintained at the source indicating the date of each inspection and if the mist collector is in proper working condition.

6. Specific Reporting Requirements:

Any exceedance in the particulate emissions rate or visible emissions standard specified in this permit shall be reported to the Division as soon as possible per General Condition F 8 of this permit. In addition, the owner or operator shall certify, annually, whether the opacity measurements were conducted continuously or intermittently, and if intermittent, the frequency of such measurements.

7. Specific Control Equipment Operating Conditions:

The mist collector used as the control equipment shall be inspected to ensure its proper operation. Inspection of the mist collector shall consist of a weekly check of the visible emissions, to confirm that the emissions are normal, as well as a quarterly visual inspection of the filter media to determine that they are in proper working condition. The mist collector shall be operated at all times that the polishing unit is in operation.

SECTION B - EMISSION POINTS, AFFECTED FACILITIES, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS (CONTINUED)

102(S-102) Flat Products Annealing Furnace #4
Description:
An annealing furnace with a maximum natural gas usage rate of 130 MMBtu/hr, and low NOx burners used to control nitrogen oxide emissions.
Proposed Construction Date: September 1, 2006.

APPLICABLE REGULATIONS:
401 KAR 59:010 - New process operations.
401 KAR 51:017- Prevention of significant deterioration of air quality

1. Operating Limitations:
None.

2. Emission Limitations:
a) Visible emissions shall not equal or exceed 20 percent opacity [401 KAR 59:010, Section 3(2)]
b) Total particulate emissions: See Section D.
c) Total nitrogen oxide emissions: See Section D.
d) Total VOC emissions: See Section D.
e) Total carbon monoxide emissions: See Section D.

Compliance Demonstration Method:
To provide reasonable assurance that the emission limitations are being met as described in Section D, the permittee shall monitor natural gas usage rate on monthly basis and monthly hours of operation.

The particulate emission rate shall be calculated as follows:

Particulate Emission Rate = (tons/month)	Monthly natural gas consumption rate (mmscf/month) x 1000 (mmBTU/mmscf) x Controlled PM emission factor* (lbs/mmBTU)/2000 (lbs/ton).
Particulate Emission Rate = (lbs/hr)	Monthly natural gas consumption rate (mmscf/month) x 1000 (mmBTU/mmscf) x Controlled PM emission factor* (lbs/mmBTU) / (monthly hours of operation)

*The Controlled PM emission factor shall be 0.0076 lbs/mmBTU of heat input. This emission factor shall be replaced by the number calculated from an emission test or other modification, and must be approved by the Division. Records of any such change in the emission factor used shall be maintained at the source.

SECTION B - EMISSION POINTS, AFFECTED FACILITIES, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS (CONTINUED)

The Nitrogen Oxide emission rate for this emission point shall be calculated as follows:

Nitrogen Oxide Emission Rate (tons/month) = Monthly gas consumption rate (mmscf/month) x 1000 (MMBtu/mmscf) x Controlled Nitrogen Oxide Emission Factor* (lbs/MMBtu)/2000 (lbs/ton)

Nitrogen Oxide Emission Rate (lb/hr) = Monthly gas consumption rate (mmscf/month) x 1000 (MMBtu/mmscf) x Controlled Nitrogen Oxide Emission Factor* (lbs/MMBtu)/(monthly hours of operation)

*The controlled nitrogen oxide emission factor used shall be 0.06 lb/MMBtu of heat input. This emission factor shall be replaced by the number calculated whenever an emissions test or other modification, approved by the Division, is carried out for this emission point. Records of any such change in the emission factor used shall be maintained at the source.

The VOC emissions rate shall be calculated as follows:

VOC Emission Rate (tons/month) = Monthly natural gas consumption rate (mmscf/month) x 1000 (mmBTU/mmscf) x Controlled VOC emission factor* (lbs/mmBTU)/2000 (lbs/ton).

VOC Emission Rate (lbs/hr) = Monthly natural gas consumption rate (mmscf/month) x 1000 (mmBTU/mmscf) x Controlled VOC emission factor* (lbs/mmBTU) / (monthly hours of operation).

*The Controlled VOC emission factor shall be 0.0055 lbs/mmBTU of heat input. This emission factor shall be replaced by the number calculated from an emission test or other modification, and must be approved by the Division. Records of any such change in the emission factor used shall be maintained at the source.

The Carbon Monoxide emissions rate shall be calculated as follows:

CO Emission Rate (tons/month) = Monthly natural gas consumption rate (mmscf/month) x 1000 (mmBTU/mmscf) x Controlled CO emission factor* (lbs/mmBTU)/2000 (lbs/ton).

CO Emission Rate (lbs/hr) = Monthly natural gas consumption rate (mmscf/month) x 1000 (mmBTU/mmscf) x Controlled CO emission factor* (lbs/mmBTU) / (monthly hours of operation).

*The Controlled CO emission factor shall be 0.084 lbs/mmBTU of heat input. This emission factor shall be replaced by the number calculated from an emission test or other modification, and must be approved by the Division. Records of any such change in the emission factor used shall be maintained at the source.

Compliance with annual limits shall be calculated as a rolling twelve month total. The rolling 12 month total shall be calculated at the beginning of each month for the previous twelve

SECTION B - EMISSION POINTS, AFFECTED FACILITIES, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS (CONTINUED)

months.

3. Testing Requirements:

The permittee shall test for PM, CO, VOC and NOx within sixty (60) days after achieving the maximum production rate at which the affected facilities will be operated but not later than 180 days after initial start-up of such facilities, the permittee shall conduct a performance demonstration on the affected facilities in accordance with 401 KAR 50:055, General compliance requirements. These performance tests must also be conducted in accordance with General Provisions G(d)7 of this permit.

4. Specific Monitoring Requirements:

a. The permittee shall perform monthly visual inspections where:

iii. If no visible emissions are observed then no further monitoring is required.

iv. If visible emissions are observed, the permittee shall perform a Method 9 reading.

b. The permittee shall monitor the hours of operation (per month, and 12 month rolling period), monthly natural gas usage rate, and the calculated nitrogen oxide, VOC, CO and PM/PM10 emissions.

5. Specific Record Keeping Requirements:

The permittee shall keep records of the monthly qualitative visible emission observations and Method 9 opacity readings, the natural gas usage, the calculated NOx, CO, VOC, and PM/PM10 emission rates, and the hours of operation (per month, and 12 month rolling total).

6. Specific Reporting Requirements:

Any exceedance in the emissions rates or visible emissions standard as specified in this permit shall be reported to the Division as soon as possible per General Condition F8 of this permit.

SECTION B - EMISSION POINTS, AFFECTED FACILITIES, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS (CONTINUED)

101(S-101)- Flat Products Pickling #4
Description:
Acid pickling of stainless steel using nitric and hydrofluoric acids with a maximum processing capacity of 140 tons of stainless steel input per hour and the use of a scrubber for 98% control of nitrogen oxides, nitric acid, and hydrofluoric acid.
Proposed Construction Date: September 1, 2006.

APPLICABLE REGULATIONS:
401 KAR 51:017- Prevention of significant deterioration of air quality

1. Operating Limitations:
None

2. Emission Limitations:
Nitrogen oxide emissions shall not exceed 50 ppm by volume, 4.81 pounds per hour and 21.05 tons per 12 month rolling total.
The nitrogen oxide emission rate for this point shall be calculated as follows:

NOx Emission Rate = (tons/month)	NO_x concentration in exit stream (ppm by volume) x 8.01E-08 (lbs/ft^3/ppm by volume) x 1,200,000 (ft^3/hr) x hours of operation per month (hrs/month)/2000 (lbs/ton)
NOx Emission Rate = (lb/hr)	NO_x concentration in exit stream (ppm by volume) x 8.01E-08 (lbs/ft^3/ppm by volume) x 1,200,000 (ft^3/hr)

The NO_2 concentration is the daily average concentration measured in the exit gas stream as per the monitoring requirements listed below.

3. Testing Requirements:
The permittee shall test for NOx within sixty (60) days after achieving the maximum production rate at which the affected facilities will be operated but not later than 180 days after initial start-up of such facilities, the permittee shall conduct a performance demonstration on the affected facilities in accordance with 401 KAR 50:055, General compliance requirements. These performance tests must also be conducted in accordance with General Provisions G(d)7 of this permit.

NOx monitor shall be calibrated, operated, and maintained according to manufacturer's recommendations.

4. Specific Monitoring Requirements:
The concentration of NO_2 in the exit stream of the scrubber, as recorded by the analyzers, shall be monitored hourly.

If the NOx monitor becomes nonoperational, additional process monitoring of the control device will be required. The pH and pressure drop of the scrubber will be recorded on an hourly basis until the hourly NOx monitoring is resumed.

SECTION B - EMISSION POINTS, AFFECTED FACILITIES, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS (CONTINUED)

5. Specific Recordkeeping Requirements:

Records of the hourly and monthly calculated NO_x emissions rates shall be maintained at the source. Records of the start and end times of operation of the pickling operation and the associated scrubber shall be maintained.

6. Specific Reporting Requirements:

Any exceedance in the NOx emissions standard specified in this permit shall be reported to the Division as soon as possible per General Condition F 8 of this permit.

7. Specific Control Equipment Operating Conditions:

a. The scrubber shall be operated at all times that the pickling unit is in operation.

b. The permittee shall monitor and record the following Scrubber operating parameters at least once per shift:
   1. Flow rate of scrubbing liquor
   2. Temperature of reaction chamber

SECTION B - EMISSION POINTS, AFFECTED FACILITIES, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS (CONTINUED)

103 (S-103) Acid Recovery Roaster

Description:

A roaster with a maximum natural gas usage rate of 39MMBtu/hr.
Proposed Construction Date: September 1, 2006.

APPLICABLE REGULATIONS:

401 KAR 59:010 - New process operations.
401 KAR 51:017- Prevention of significant deterioration of air quality

1. Operating Limitations:

None.

2. Emission Limitations:

a) Visible emissions shall not equal or exceed 20 percent.
b) Hourly particulate emissions shall not exceed 0.30 pounds per hour as averaged over 3 hours and 1.30 tons per year based on 12-month rolling total.
c) Total nitrogen oxide emissions shall not exceed 3.90 pounds per hour, and 17.08 tons per year.
d) VOC emissions shall not exceed 0.21 pounds per hour and 0.94 tons per year.
e) Total carbon monoxide emissions shall not exceed 1.95 pounds per hour and 8.54 tons per year.

Compliance Demonstration Method:

To provide reasonable assurance that the emission limitations are being met, the permittee shall monitor the monthly natural gas usage rates and monthly hours of operation.

The particulate emissions rate shall be calculated as follows:

Particulate Emission Rate = (tons/month): Monthly natural gas consumption rate (mmscf/month) x 1000 (mmBTU/mmscf)x Controlled PM emission factor* (lbs/mmBTU)/2000 (lbs/ton).

Particulate Emission Rate = (lbs/hr): Monthly natural gas consumption rate (mmscf/month) x 1000 (mmBTU/mmscf) x Controlled PM emission factor* (lbs/mmBTU) / (monthly hours of operation)

*The Controlled PM emission factor shall be 0.0076 lbs/mmBTU of heat input. This emission factor shall be replaced by the number calculated from an emission test or other modification, and must be approved by the Division. Records of any such change in the emission factor used shall be maintained at the source.

SECTION B - EMISSION POINTS, AFFECTED FACILITIES, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS (CONTINUED)

The Nitrogen Oxide emission rate for this emission point shall be calculated as follows:

Nitrogen Oxide Emission Rate (tons/month) = Monthly gas consumption rate (mmscf/month) x 1000 (MMBtu/mmscf) x Controlled Nitrogen Oxide Emission Factor* (lbs/MMBtu)/2000 (lbs/ton)

Nitrogen Oxide Emission Rate (lb/hr) = Monthly gas consumption rate (mmscf/month) x 1000 (MMBtu/mmscf) x Controlled Nitrogen Oxide Emission Factor* (lbs/MMBtu)/(monthly hours of operation)

*The controlled nitrogen oxide emission factor used shall be 0.10 lb/MMBtu of heat input. This emission factor shall be replaced by the number calculated whenever an emissions test or other modification, approved by the Division, is carried out for this emission point. Records of any such change in the emission factor used shall be maintained at the source.

The VOC emissions rate shall be calculated as follows:

VOC Emission Rate = Monthly natural gas consumption rate (mmscf/month) x
(tons/month) 1000 (mmBTU/mmscf) x Controlled VOC emission factor*
(lbs/mmBTU)/2000 (lbs/ton).

VOC Emission Rate = Monthly natural gas consumption rate (mmscf/month) x
(lbs/hr) 1000 (mmBTU/mmscf) x Controlled VOC emission factor*
(lbs/mmBTU) / (monthly hours of operation).

*The Controlled VOC emission factor shall be 0.0055 lbs/mmBTU of heat input. This emission factor shall be replaced by the number calculated from an emission test or other modification, and must be approved by the Division. Records of any such change in the emission factor used shall be maintained at the source.

The Carbon Monoxide emissions rate shall be calculated as follows:

CO Emission Rate = Monthly natural gas consumption rate (mmscf/month) x
(tons/month) 1000 (mmBTU/mmscf) x Controlled CO emission factor*
(lbs/mmBTU)/2000 (lbs/ton).

CO Emission Rate = Monthly natural gas consumption rate (mmscf/month) x
(lbs/hr) 1000 (mmBTU/mmscf) x Controlled CO emission factor*
(lbs/mmBTU) / (monthly hours of operation).

*The Controlled CO emission factor shall be 0.05 lbs/mmBTU of heat input. This emission factor shall be replaced by the number calculated from an emission test or other modification, and must be approved by the Division. Records of any such change in the emission factor used shall be maintained at the source.

Compliance with annual limits shall be calculated as a rolling twelve month total. The rolling 12 month total shall be calculated at the beginning of each month for the previous twelve

SECTION B - EMISSION POINTS, AFFECTED FACILITIES, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS (CONTINUED)

months.

3. Testing Requirements:

The permittee shall test for PM, CO, VOC, and NOx within sixty (60) days after achieving the maximum production rate at which the affected facilities will be operated but not later than 180 days after initial start-up of such facilities, the permittee shall conduct a performance demonstration on the affected facilities in accordance with 401 KAR 50:055, General compliance requirements. These performance tests must also be conducted in accordance with General Provisions G(d)7 of this permit.

4. Specific Monitoring Requirements:

a. The permittee shall perform monthly visual inspections where:
   i. If no visible emissions are observed then no further monitoring is required.
   ii. If visible emissions are observed, the permittee shall perform a Method 9 reading.

b. The permittee shall monitor the hours of operation (per month, and 12 month rolling total), natural gas usage rate and the calculated nitrogen oxide, CO, VOC, and PM/PM10 emissions.

5. Specific Record Keeping Requirements:

The permittee shall keep records of the monthly qualitative visible emission observations and Method 9 opacity readings, the natural gas usage, the calculated NOx, CO, VOC, and PM/PM10 emission rates, and the hours of operation (per month, and 12 month rolling total).

6. Specific Reporting Requirements:

Any exceedance in the emissions rates or visible emissions standard as specified in this permit shall be reported to the Division as soon as possible per General Condition F 8 of this permit.

SECTION B - EMISSION POINTS, AFFECTED FACILITIES, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS (CONTINUED)

104(S-104) - Acid Recovery Line

Description:

The Acid Recovery system separates free acid from dissolved metals salts, using a resin bed technology, acid retardation. The free acids are recovered and pumped back to the pickling tanks for re-use and the dissolved metal salts are pumped to the waste acid treatment.
Proposed Construction Date: September 1, 2006.

APPLICABLE REGULATIONS:

401 KAR 51:017- Prevention of significant deterioration of air quality

1. **Operating Limitations:** None

2. **Emission Limitations:**

Nitrogen oxide emissions shall not exceed 50 ppm by volume, 0.48 pounds per hour and 2.1 tons per 12 month rolling total.

The nitrogen oxide emission rate for this point shall be calculated as follows:

NOx Emission Rate = (tons/month)	NO_x concentration in exit stream (ppm by volume) x 8.01E-08 (lbs/ft^3/ppm by volume) x 180,000 (ft^3/hr) x hours of operation per month (hrs/month)/2000 (lbs/ton)
NOx Emission Rate = (lb/hr)	NO_x concentration in exit stream (ppm by volume) x 8.01E-08 (lbs/ft^3/ppm by volume) x 180,000 (ft^3/hr)

The nitrogen oxide concentration used shall be 50 ppm by volume based on vendor specifications. This specified concentration shall be replaced by the concentration from an emissions test or other modification, approved by the Division. Records of any such change in the concentration used shall be maintained at the source.

3. **Testing Requirements:**

The permittee shall test for NOx within sixty (60) days after achieving the maximum production rate at which the affected facilities will be operated but not later than 180 days after initial start-up of such facilities, the permittee shall conduct a performance demonstration on the affected facilities in accordance with 401 KAR 50:055, General compliance requirements. These performance tests must also be conducted in accordance with General Provisions G(d)7 of this permit.

4. **Specific Monitoring Requirements:**

The average acid process rate and hours of operation will be monitored.

5. **Specific Recordkeeping Requirements:**

Records of the monthly calculated NOx emission rates for the 12-month rolling total shall be maintained at the source.

6. **Specific Reporting Requirements:**

Any exceedance in the NOx emissions standard specified in this permit shall be reported to the Division as soon as possible per General Condition F 8 of this permit. In addition, the owner or operator shall certify, annually, whether the NOx measurements were conducted continuously or intermittently, and if intermittent, the frequency of such measurements.

SECTION C- INSIGNIFICANT ACTIVITIES

The following listed activities have been determined to be insignificant activities for this source pursuant to Regulation 401 KAR 52:020, Section 6. While these activities are designated as insignificant the permittee must comply with the applicable regulation and some minimum level of periodic monitoring may be necessary.

Description	Generally Applicable Regulation
1. T-01: 2 Hydrofluoric acid (70%) storage tanks	None.
2. T-02: 2 Nitric acid (68%) storage tanks	None.
3. T-03: 1 Sodium hydroxide (25%) storage tank	None.
4. T-04: 1 Urea storage tank	None.
5. T-05: 1 Diesel storage tank	None.
6. T-06: Waste water lime Day #1	None.
7. T-07: Waste water lime Day #2	None.
8. C-01: AP lines cooling tower	None.
9. C-02: Z-mill #1 cooling tower	None.
10. W-01: Scale pit water treatment	None.
11. C-03: Z-mill #2 cooling tower	None.
12. V-01 to V-09: Fugitive emissions from welders, and an alkali scrubber.	None.
13. EP #27- Shot Blaster for Plate Line	401 KAR 59:010
14. EP 72 & 73: Sulfuric Acid Pickling Lines 1 & 2	None.
15. EP 91: Billet Caster with Sheer	None.
16. EP 02: Shot Blaster	401 KAR 59:010
17. EP 77: Angle Shot Blaster	401 KAR 59:010
18. EP 111: AP#4 Shot Blaster	401 KAR 59:010

SECTION D - SOURCE EMISSION LIMITATIONS AND TESTING REQUIREMENTS

1. As required by Section 1b of the *Cabinet Provisions and Procedures for Issuing Title V Permits* incorporated by reference in 401 KAR 52:020, Section 26; compliance with annual emissions and processing limitations contained in this permit, shall be based on emissions and processing rates for any twelve (12) consecutive months.

2. NOx, PM10, VOC, and CO emissions, as measured by methods referenced in 401 KAR 50:015, Section 1, shall not exceed the respective limitations specified herein.

3. Pursuant to 401 KAR 63:010, Section 3, reasonable precautions shall be taken to prevent particulate matter from becoming airborne. Such reasonable precautions shall include, but are not limited to the following:
   a. Application and maintenance of asphalt, application of water, or suitable chemicals on roads, material stockpiles, and other surfaces which can create airborne dusts.
   b. Installation and use of hoods, fans, and fabric filters, to enclose and vent the handling of dusty materials, or use of water sprays or other measures to suppress the dust emissions during handling.
   c. Discharge of fugitive dust emissions beyond the property line is prohibited.

4. Combined emissions of NOx, PM10, VOC, and CO from Emission Points 01, 06, 61 and 102 shall not exceed the following limits:
   a) Hourly particulate emissions shall not exceed 2.68 pounds per hour and 11.74 tons per 12-month rolling total.[401 KAR 51:017]
   b) Total nitrogen oxide emissions shall not exceed 21.15 pounds per hour and 92.64 tons per 12 month rolling total. [401 KAR 51:017]
   c) VOC emissions shall not exceed 1.95 pounds per hour and 8.5 tons per 12 month rolling total. [401 KAR 51:017]
   d) Total carbon monoxide emissions shall not exceed 29.61 pounds per hour and 129.71 tons per 12 month rolling total. [401 KAR 51:017]

SECTION E – SOURCE CONTROL EQUIPMENT OPERATING REQUIREMENTS

Pursuant to 401 KAR 50:055, Section 2(5), at all times, including periods of startup, shutdown and malfunction, owners and operators shall, to the extent practicable, maintain and operate any affected facility including associated air pollution control equipment in a manner consistent with good air pollution control practice for minimizing emissions. Determination of whether acceptable operating and maintenance procedures are being used will be based on information available to the Division which may include, but is not limited to, monitoring results, opacity observations, review of operating and maintenance procedures, and inspection of the source.

SECTION F - MONITORING, RECORD KEEPING, AND REPORTING REQUIREMENTS

1. Pursuant to Section 1b (IV)1 of the *Cabinet Provisions and Procedures for Issuing Title V Permits* incorporated by reference in 401 KAR 52:020, Section 26, when continuing compliance is demonstrated by periodic testing or instrumental monitoring, the permittee shall compile records of required monitoring information that include:
   a. Date, place as defined in this permit, and time of sampling or measurements;
   b. Analyses performance dates;
   c. Company or entity that performed analyses;
   d. Analytical techniques or methods used;
   e. Analyses results; and
   f. Operating conditions during time of sampling or measurement.

2. Records of all required monitoring data and support information, including calibrations, maintenance records, and original strip chart recordings, and copies of all reports required by the Division for Air Quality, shall be retained by the permittee for a period of five years and shall be made available for inspection upon request by any duly authorized representative of the Division for Air Quality [Sections 1b(IV) 2 and 1a(8) of the *Cabinet Provisions and Procedures for Issuing Title V Permits* incorporated by reference in 401 KAR 52:020, Section 26].

3. In accordance with the requirements of 401 KAR 52:020 Section 3(1)h the permittee shall allow authorized representatives of the Cabinet to perform the following during reasonable times:
   a. Enter upon the premises to inspect any facility, equipment (including air pollution control equipment), practice, or operation;
   b. To access and copy any records required by the permit:
   c. Sample or monitor, at reasonable times, substances or parameters to assure compliance with the permit or any applicable requirements.

   Reasonable times are defined as during all hours of operation, during normal office hours; or during an emergency.

4. No person shall obstruct, hamper, or interfere with any Cabinet employee or authorized representative while in the process of carrying out official duties. Refusal of entry or access may constitute grounds for permit revocation and assessment of civil penalties.

5. Summary reports of any monitoring required by this permit, other than continuous emission or opacity monitors, shall be submitted to the Regional Office listed on the front of this permit at least every six (6) months during the life of this permit, unless otherwise stated in this permit. For emission units that were still under construction or which had not commenced operation at the end of the 6-month period covered by the report and are subject to monitoring requirements in this permit, the report shall indicate that no monitoring was performed during the previous six months because the emission unit was not in operation [Section 1b (V)1 of the *Cabinet Provisions and Procedures for Issuing Title V Permits* incorporated by reference in 401 KAR 52:020, Section 26].

SECTION F - MONITORING, RECORD KEEPING, AND REPORTING REQUIREMENTS (CONTINUED)

6. The semi-annual reports are due by January 30th and July 30th of each year. If continuous emission and opacity monitors are required by regulation or this permit, data shall be reported to the Technical Services Branch in accordance with the requirements of 401 KAR 59:005, General Provisions, Section 3(3). All reports shall be certified by a responsible official pursuant to 401 KAR 52:020 Section 23. All deviations from permit requirements shall be clearly identified in the reports.

7. In accordance with the provisions of 401 KAR 50:055, Section 1 the owner or operator shall notify the Regional Office listed on the front of this permit concerning startups, shutdowns, or malfunctions as follows:
   a. When emissions during any planned shutdowns and ensuing startups will exceed the standards notification shall be made no later than three (3) days before the planned shutdown, or immediately following the decision to shut down, if the shutdown is due to events which could not have been foreseen three (3) days before the shutdown.
   b. When emissions due to malfunctions, unplanned shutdowns and ensuing startups are or may be in excess of the standards, notification shall be made as promptly as possible by telephone (or other electronic media) and shall submit written notice upon request.

8. The owner or operator shall report emission related exceedances from permit requirements including those attributed to upset conditions (other than emission exceedances covered by Section F.7. above) to the Regional Office listed on the front of this permit within 30 days. Other deviations from permit requirements shall be included in the semiannual report required by Section F.6 [Section 1b (V) 3, 4. of the *Cabinet Provisions and Procedures for Issuing Title V Permits* incorporated by reference in 401 KAR 52:020, Section 26].

9. Pursuant to 401 KAR 52:020, Permits, Section 21, the permittee shall annually certify compliance with the terms and conditions contained in this permit, by completing and returning a Compliance Certification Form (DEP 7007CC) (or an alternative approved by the regional office) to the Regional Office listed on the front of this permit and the U.S. EPA in accordance with the following requirements:
   a. Identification of the term or condition;
   b. Compliance status of each term or condition of the permit;
   c. Whether compliance was continuous or intermittent;
   d. The method used for determining the compliance status for the source, currently and over the reporting period.
   e. For an emissions unit that was still under construction or which has not commenced operation at the end of the 12-month period covered by the annual compliance certification, the permittee shall indicate that the unit is under construction and that compliance with any applicable requirements will be demonstrated within the timeframes specified in the permit.

SECTION F - MONITORING, RECORD KEEPING, AND REPORTING REQUIREMENTS (CONTINUED)

f. The certification shall be postmarked by January 30th of each year. Annual compliance certifications should be mailed to the following addresses:

Division for Air Quality
Florence Regional Office
8020 Veterans Memorial Drive,
Suite 110
Florence, KY 41042

U.S. EPA Region IV
Air Enforcement Branch
Atlanta Federal Center
61 Forsyth St.
Atlanta, GA 30303-8960

Division for Air Quality
Central Files
803 Schenkel Lane
Frankfort, KY 40601

10. In accordance with 401 KAR 52:020, Section 22, the permittee shall provide the Division with all information necessary to determine its subject emissions within thirty (30) days of the date the KYEIS emission survey is mailed to the permittee.

11. Pursuant to 401 KAR 50:045, performance testing required by the permit shall be conducted according to the timeline listed in 401 KAR 50:045. The division requires that results of performance test(s) required by the permit shall be submitted to the Division by the source or its representative within forty-five days after the completion of the fieldwork.

SECTION G - GENERAL PROVISIONS

(a) General Compliance Requirements

1. The permittee shall comply with all conditions of this permit. Noncompliance shall be a violation of 401 KAR 52:020 and of the Clean Air Act and is grounds for enforcement action including but not limited to termination, revocation and reissuance, revision or denial of a permit [Section 1a, 3 of the *Cabinet Provisions and Procedures for Issuing Title V Permits* incorporated by reference in 401 KAR 52:020 Section 26].

2. The filing of a request by the permittee for any permit revision, revocation, reissuance, or termination, or of a notification of a planned change or anticipated noncompliance, shall not stay any permit condition [Section 1a, 6 of the *Cabinet Provisions and Procedures for Issuing Title V Permits* incorporated by reference in 401 KAR 52:020, Section 26].

3. This permit may be revised, revoked, reopened and reissued, or terminated for cause in accordance with 401 KAR 52:020, Section 19. The permit will be reopened for cause and revised accordingly under the following circumstances:
   a. If additional applicable requirements become applicable to the source and the remaining permit term is three (3) years or longer. In this case, the reopening shall be completed no later than eighteen (18) months after promulgation of the applicable requirement. A reopening shall not be required if compliance with the applicable requirement is not required until after the date on which the permit is due to expire, unless this permit or any of its terms and conditions have been extended pursuant to 401 KAR 52:020, Section 12;
   b. The Cabinet or the U. S. EPA determines that the permit must be revised or revoked to assure compliance with the applicable requirements;
   c. The Cabinet or the U. S. EPA determines that the permit contains a material mistake or that inaccurate statements were made in establishing the emissions standards or other terms or conditions of the permit;

   Proceedings to reopen and reissue a permit shall follow the same procedures as apply to initial permit issuance and shall affect only those parts of the permit for which cause to reopen exists. Reopenings shall be made as expeditiously as practicable. Reopenings shall not be initiated before a notice of intent to reopen is provided to the source by the Division, at least thirty (30) days in advance of the date the permit is to be reopened, except that the Division may provide a shorter time period in the case of an emergency.

4. The permittee shall furnish information upon request of the Cabinet to determine if cause exists for modifying, revoking and reissuing, or terminating the permit; or compliance with the conditions of this permit [Section 1a, 7,8 of the *Cabinet Provisions and Procedures for Issuing Title V Permits* incorporated by reference in 401 KAR 52:020, Section 26].

5. The permittee, upon becoming aware that any relevant facts were omitted or incorrect information was submitted in the permit application, shall promptly submit such facts or corrected information to the permitting authority [401 KAR 52:020, Section 7(1)].

SECTION G - GENERAL PROVISIONS (CONTINUED)

6. Any condition or portion of this permit which becomes suspended or is ruled invalid as a result of any legal or other action shall not invalidate any other portion or condition of this permit [Section 1a, 14 of the *Cabinet Provisions and Procedures for Issuing Title V Permits* incorporated by reference in 401 KAR 52:020, Section 26].

7. The permittee shall not use as a defense in an enforcement action the contention that it would have been necessary to halt or reduce the permitted activity in order to maintain compliance [Section 1a, 4 of the *Cabinet Provisions and Procedures for Issuing Title V Permits* incorporated by reference in 401 KAR 52:020, Section 26].

8. Except for requirements identified in this permit as state-origin requirements, all terms and conditions shall be enforceable by the United States Environmental Protection Agency and citizens of the United States [Section 1a, 15 of the *Cabinet Provisions and Procedures for Issuing Title V Permits* incorporated by reference in 401 KAR 52:020, Section 26].

9. This permit shall be subject to suspension if the permittee fails to pay all emissions fees within 90 days after the date of notice as specified in 401 KAR 50:038, Section 3(6) [Section 1a, 10 of the *Cabinet Provisions and Procedures for Issuing Title V Permits* incorporated by reference in 401 KAR 52:020, Section 26].

10. Nothing in this permit shall alter or affect the liability of the permittee for any violation of applicable requirements prior to or at the time of permit issuance [401 KAR 52:020, Section 11(3)(b)].

11. This permit does not convey property rights or exclusive privileges [Section 1a, 9 of the *Cabinet Provisions and Procedures for Issuing Title V Permits* incorporated by reference in 401 KAR 52:020, Section 26].

12. Issuance of this permit does not relieve the permittee from the responsibility of obtaining any other permits, licenses, or approvals required by the Kentucky Cabinet for Natural Resources and Environmental Protection or any other federal, state, or local agency.

13. Nothing in this permit shall alter or affect the authority of U.S. EPA to obtain information pursuant to Federal Statute 42 USC 7414, Inspections, monitoring, and entry [401 KAR 52:020, Section 11(3)(d)].

14. Nothing in this permit shall alter or affect the authority of U.S. EPA to impose emergency orders pursuant to Federal Statute 42 USC 7603, Emergency orders [401 KAR 52:020, Section 11(3)(a)].

15. This permit consolidates the authority of any previously issued PSD, NSR, or Synthetic Minor source preconstruction permit terms and conditions for various emission units and incorporates all requirements of those existing permits into one single permit for this source.

SECTION G - GENERAL PROVISIONS (CONTINUED)

16. Pursuant to 401 KAR 52:020, Section 11, a permit shield shall not protect the owner or operator from enforcement actions for violating an applicable requirement prior to or at the time of issuance. Compliance with the conditions of a permit shall be considered compliance with:
    (a) Applicable requirements that are included and specifically identified in the permit and
    (b) Non-applicable requirements expressly identified in this permit.

(b) Permit Expiration and Reapplication Requirements

1. This permit shall remain in effect for a fixed term of five (5) years following the original date of issue. Permit expiration shall terminate the source's right to operate unless a timely and complete renewal application has been submitted to the Division at least six months prior to the expiration date of the permit. Upon a timely and complete submittal, the authorization to operate within the terms and conditions of this permit, including any permit shield, shall remain in effect beyond the expiration date, until the renewal permit is issued or denied by the Division [401 KAR 52:020, Section 12].

2. The authority to operate granted shall cease to apply if the source fails to submit additional information requested by the Division after the completeness determination has been made on any application, by whatever deadline the Division sets [401 KAR 52:02+0 Section 8(2)].

(c) Permit Revisions

1. A minor permit revision procedure may be used for permit revisions involving the use of economic incentive, marketable permit, emission trading, and other similar approaches, to the extent that these minor permit revision procedures are explicitly provided for in the SIP or in applicable requirements and meet the relevant requirements of 401 KAR 52:020, Section 14(2).

2. This permit is not transferable by the permittee. Future owners and operators shall obtain a new permit from the Division for Air Quality. The new permit may be processed as an administrative amendment if no other change in this permit is necessary, and provided that a written agreement containing a specific date for transfer of permit responsibility coverage and liability between the current and new permittee has been submitted to the permitting authority within ten (10) days following the transfer.

(d) Construction, Start-Up, and Initial Compliance Demonstration Requirements
Pursuant to a duly submitted application the Kentucky Division for Air Quality hereby authorizes the construction of the equipment described herein, in accordance with the terms and conditions of this permit.

1. Construction of any process and/or air pollution control equipment authorized by this permit shall be conducted and completed only in compliance with the conditions of this permit.

SECTION G - GENERAL PROVISIONS (CONTINUED)

2. Within thirty (30) days following commencement of construction and within fifteen (15) days following start-up and attainment of the maximum production rate specified in the permit application, or within fifteen (15) days following the issuance date of this permit, whichever is later, the permittee shall furnish to the Regional Office listed on the front of this permit in writing, with a copy to the Division's Frankfort Central Office, notification of the following:
   a. The date when construction commenced.
   b. The date of start-up of the affected facilities listed in this permit.
   c. The date when the maximum production rate specified in the permit application was achieved.

3. Pursuant to 401 KAR 52:020, Section 3(2), unless construction is commenced within eighteen (18) months after the permit is issued, or begins but is discontinued for a period of eighteen (18) months or is not completed within a reasonable timeframe then the construction and operating authority granted by this permit for those affected facilities for which construction was not completed shall immediately become invalid. Upon written request, the Cabinet may extend these time periods if the source shows good cause.

4. For those affected facilities for which construction is authorized by this permit, a source shall be allowed to construct with the proposed permit. Operational or final permit approval is not granted by this permit until compliance with the applicable standards specified herein has been demonstrated pursuant to 401 KAR 50:055. If compliance is not demonstrated within the prescribed timeframe provided in 401 KAR 50:055, the source shall operate thereafter only for the purpose of demonstrating compliance, unless otherwise authorized by Section I of this permit or order of the Cabinet.

5. This permit shall allow time for the initial start-up, operation, and compliance demonstration of the affected facilities listed herein. However, within sixty (60) days after achieving the maximum production rate at which the affected facilities will be operated but not later than 180 days after initial start-up of such facilities, the permittee shall conduct a performance demonstration test on the affected facilities in accordance with 401 KAR 50:055, General compliance requirements. These performance tests must also be conducted in accordance with General Provisions G(d)7 of this permit and the permittee must furnish to the Division for Air Quality's Frankfort Central Office a written report of the results of such performance test

6. Terms and conditions in this permit established pursuant to the construction authority of 401 KAR 51:017 or 401 KAR 51:052 shall not expire.

7. Pursuant to Section VII 2.(1) of the policy manual of the Division for Air Quality as referenced by 401 KAR 50:016, Section 1.(1), at least one month prior to the date of the required performance test, the permittee shall complete and return a Compliance Test Protocol (Form DEP 6027) to the Division's Frankfort Central Office. Pursuant to 401 KAR 50:045, Section 5, the Division shall be notified of the actual test date at least ten (10) days prior to the test.

SECTION G - GENERAL PROVISIONS (CONTINUED)

8. Pursuant to Section VII 1.(2 and 3) of the policy manual of the Division for Air Quality as referenced by 401 KAR 50:016, Section 1.(1), if a demonstration of compliance, through performance testing was made at a production rate less than the maximum specified in the application form, then the permittee is only authorized to operate at a rate that is not greater than 110% of the rate demonstrated during performance testing. If and when the facility is capable of operation at the rate specified in the application, compliance must be demonstrated at the new production rate if required by the Division.

(e) Acid Rain Program Requirements

1. If an applicable requirement of Federal Statute 42 USC 7401 through 7671q (the Clean Air Act) is more stringent than an applicable requirement promulgated pursuant to Federal Statute 42 USC 7651 through 7651o (Title IV of the Act), both provisions shall apply, and both shall be state and federally enforceable.

(f) Emergency Provisions

1. Pursuant to 401 KAR 52:020 Section 24(1), an emergency shall constitute an affirmative defense to an action brought for the noncompliance with the technology-based emission limitations if the permittee demonstrates through properly signed contemporaneous operating logs or relevant evidence that:
   a. An emergency occurred and the permittee can identify the cause of the emergency;
   b. The permitted facility was at the time being properly operated;
   c. During an emergency, the permittee took all reasonable steps to minimize levels of emissions that exceeded the emissions standards or other requirements in the permit; and
   d. Pursuant to 401 KAR 52:020, 401 KAR 50:055, and KRS 224.01-400, the permittee notified the Division as promptly as possible and submitted written notice of the emergency to the Division when emission limitations were exceeded due to an emergency. The notice shall include a description of the emergency, steps taken to mitigate emissions, and corrective actions taken.
   e. This requirement does not relieve the source of other local, state or federal notification requirements.

2. Emergency conditions listed in General Condition (f)1 above are in addition to any emergency or upset provision(s) contained in an applicable requirement [401 KAR 52:020, Section 24(3)].

3. In an enforcement proceeding, the permittee seeking to establish the occurrence of an emergency shall have the burden of proof [401 KAR 52:020, Section 24(2)].

SECTION G - GENERAL PROVISIONS (CONTINUED)

(g) Risk Management Provisions

1. The permittee shall comply with all applicable requirements of 401 KAR Chapter 68, Chemical Accident Prevention, which incorporates by reference 40 CFR Part 68, Risk Management Plan provisions. If required, the permittee shall comply with the Risk Management Program and submit a Risk Management Plan to:

   RMP Reporting Center
   P.O. Box 3346
   Merrifield, VA, 22116-3346

2. If requested, submit additional relevant information to the Division or the U.S. EPA.

(h) Ozone depleting substances

1. The permittee shall comply with the standards for recycling and emissions reduction pursuant to 40 CFR 82, Subpart F, except as provided for Motor Vehicle Air Conditioners (MVACs) in Subpart B:
   a. Persons opening appliances for maintenance, service, repair, or disposal shall comply with the required practices contained in 40 CFR 82.156.
   b. Equipment used during the maintenance, service, repair, or disposal of appliances shall comply with the standards for recycling and recovery equipment contained in 40 CFR 82.158.
   c. Persons performing maintenance, service, repair, or disposal of appliances shall be certified by an approved technician certification program pursuant to 40 CFR 82.161.
   d. Persons disposing of small appliances, MVACs, and MVAC-like appliances (as defined at 40 CFR 82.152) shall comply with the recordkeeping requirements pursuant to 40 CFR 82.166
   e. Persons owning commercial or industrial process refrigeration equipment shall comply with the leak repair requirements pursuant to 40 CFR 82.156.
   f. Owners/operators of appliances normally containing 50 or more pounds of refrigerant shall keep records of refrigerant purchased and added to such appliances pursuant to 40 CFR 82.166.

2. If the permittee performs service on motor (fleet) vehicle air conditioners containing ozone-depleting substances, the source shall comply with all applicable requirements as specified in 40 CFR 82, Subpart B, *Servicing of Motor Vehicle Air Conditioners*.

SECTION H - ALTERNATE OPERATING SCENARIOS

The alternative operating scenarios are applicable to the modifications of the air pollution control equipment of Z-Mills 1 and Z-Mill 2. The requirements as presented below are applicable once the modification of the air pollution control device is completed at the respective source.

05 (S-05) - Z-Mill #1 - Cold Rolling Mill:
Description:
Sedzimer Cluster Mill with a maximum production rate of 100 tons of steel coil per hour and an annual average of 40 tons of steel per hour. The mill shall be equipped with an oil mist eliminator, with a control efficiency of 98%, used to control particulate oil emissions.
Construction commenced - October 1991.

11 (S-21) - Z-Mill #2 - Cold Rolling Mill:
Description:
Sedzimer Cluster Mill with a maximum production rate of 100 tons of steel coil per hour and an annual average of 40 tons of steel per hour. The mill shall be equipped with an oil mist eliminator, with a control efficiency of 98%, used to control particulate oil emissions.
Construction commenced - January, 1995.

APPLICABLE REGULATIONS:
401 KAR 59:010 - New process operations.
401 KAR 51:017- Prevention of significant deterioration.

1. Operating Limitations:

The mill shall be equipped with an oil mist eliminator, with a control efficiency of 98%, used to control particulate oil emissions.

Compliance Demonstration Methods:
Records shall be kept when the effected units above are operational but the control equipment is not.

2. Emission Limitations:

Particulate emissions shall not exceed 6.6 tons per 12 month rolling total
VOC emissions shall not exceed 100 tons per 12 month rolling total
Visible emissions shall not equal or exceed 20% opacity.

The particulate emission rates shall be calculated as follows:
Particulate Emission Rate = [Steel processing rate (tons/month) x Controlled Particulate (tons/month) Emission Factor* (lbs/tons of steel)/ 2000 (lbs/ton)]

*The controlled steel particulate emissions factor used shall be 0.0375 lbs/tons of steel. This emission factors shall be replaced by the number calculated whenever an emissions test or other modification, approved by the Division, is carried out for this emission point.

SECTION H - ALTERNATE OPERATING SCENARIOS (CONTINUED)

VOC Emission Rate (tons/month) = Rolling oil makeup rate (gallons/month) x VOC Emission Factor* (lbs/gallon of rolling oil used) / 2000 (lbs/ton)

*The VOC emission factor used shall be 1.3 lbs/gallon of rolling oil make up rate (oil added minus loss associated with DE system, oil removal from tank, and other quantifiable losses). These emission factors shall be replaced by the numbers calculated whenever an emissions test or other modification, approved by the Division, is carried out for this emission point.

3. Testing Requirements:

a. The permittee shall test for PM and VOC within sixty (60) days after achieving the maximum production rate at which the affected facilities will be operated but not later than 180 days after initial start-up of such facilities, the permittee shall conduct a performance demonstration on the affected facilities in accordance with 401 KAR 50:055, General compliance requirements. These performance tests must also be conducted in accordance with General Provisions G(d)7 of this permit.

b. If the weekly observations of the visible emissions from this emission point are found to be in excess of the limits prescribed above on more than two occasions in any three month period, a stack test shall be conducted to determine the emission factor used to calculate compliance with the allowable particulate emissions rate, as listed in this permit, within three months of the last exceedance. The owner or operator shall notify the Division of the performance test at least 30 days prior to the proposed test date and shall obtain approval from the Division for the procedures that will be used to determine compliance. Method 5 shall be used to determine the particulate emissions.

4. Specific Monitoring Requirements:

a. The permittee shall perform weekly visual inspections where:
   i. If no visible emissions are observed then no further monitoring is required.
   ii. If visible emissions are observed, the permittee shall perform a Method 9 reading.

b. The calculated particulate and VOC emissions, and steel usage shall be monitored to ensure compliance with the emissions limits listed above.

5. Specific Record Keeping Requirements:

a. Records shall be maintained of the weekly and quarterly opacity measurements as required by this permit. Records shall also be maintained of the last two opacity measurements that are in excess of the emission limits specified in this permit, including the date and time of the exceedance.

b. Records of the calculated particulate emission rates, steel production rate and hours of operation of this unit shall be maintained at the source. In addition, a record of the visual inspection of the air pollution controls shall be maintained at the source indicating the date of each inspection and whether it is in proper working condition.

6. Specific Reporting Requirements:

Any exceedance in the particulate emissions rate or visible emissions standard specified in

SECTION H - ALTERNATE OPERATING SCENARIOS (CONTINUED)

this permit shall be reported to the Division as soon as possible per General Condition F 8 of this permit. In addition, the owner or operator shall certify, annually, whether the opacity measurements were conducted continuously or intermittently, and if intermittent, the frequency of such measurements.

7. Specific Control Equipment Operating Conditions:

The oil mist eliminator used as the control equipment shall be inspected to ensure its proper operation. Inspection of the pollution controls shall consist of a quarterly visual inspection to determine whether they are in proper working condition. The controls shall be operated at all times that the rolling mill is in operation.

SECTION H - ALTERNATE OPERATING SCENARIOS (CONTINUED)

The alternative operating scenarios are applicable to the modifications of the air pollution control equipment of Plate Pickling Line, Angle Pickling Lines, and Coil Pickling Lines. The requirements as presented below are applicable once the modification of the air pollution control device is completed at the respective source.

28 (28) – Plate Pickling Line:
Description:
Acid pickling of steel sheets using nitric and hydrofluoric acids with a maximum processing capacity of 40 tons of steel input per hour and using a chemical scrubber for control of nitrogen oxides, nitric acid, and hydrofluoric acid.
Construction commenced - January 1991

78 (78) – Angle Pickling Line 1:
Description:
Acid pickling of steel sheets using nitric and hydrofluoric acids with a maximum processing capacity of 40 tons of steel input per hour and an annual average of 17.5 tons of steel input per hour. The acid pickling operation shall be equipped with a scrubber and SCR system to control nitrogen oxides, nitric acid, and hydrofluoric acid.
Construction commenced – March 15, 2002

114 (114) – Angle Pickling Line 2:
Description:
Acid pickling of steel sheets using nitric and hydrofluoric acids with a maximum processing capacity of 40 tons of steel input per hour and an annual average of 17.5 tons of steel input per hour. The acid pickling operation shall be equipped with a scrubber and SCR system to control nitrogen oxides, nitric acid, and hydrofluoric acid.
Construction commenced – March 3, 2007

APPLICABLE REGULATIONS:

401 KAR 51:017 Prevention of significant deterioration of air quality.

1. **Operating Limitations:**
   None

2. **Emission Limitations:**
   a. Nitrogen oxide emissions shall not exceed 50 ppm, 0.72 lb/hr.
   b. Nitrogen oxide emissions shall not exceed 3.16 tons per 12 month rolling total.

   The following formulas will be used in calculating the NO_x emissions:
   NO_x emissions rate (tons/day) = Average NO_2 concentration in exit stream (ppm by volume) x 1.1945E-7 (lbs/cu. ft./ppm by volume) x 180,000 (cu. ft./hr) x hours of operation (hrs/day) x 0.0005 (tons/lb)

   Monthly NO_x emissions rate (tons/month) = Daily NO_x emissions rate (tons/day) x days of operation per month (hrs/month)

SECTION H - ALTERNATE OPERATING SCENARIOS (CONTINUED)

The NO_2 concentration is the daily average concentration measured in the exit gas stream as per the monitoring requirements listed below.

3. **Testing Requirements:**

The permittee shall test for NOx within sixty (60) days after achieving the maximum production rate at which the affected facilities will be operated but not later than 180 days after initial start-up of such facilities, the permittee shall conduct a performance demonstration on the affected facilities in accordance with 401 KAR 50:055, General compliance requirements. These performance tests must also be conducted in accordance with General Provisions G(d)7 of this permit.

NOx monitor shall be calibrated, operated, and maintained according to manufacturer's recommendations.

4. Specific Monitoring Requirements:

a. The concentration of NO_2 in the exit stream of the scrubber, as recorded by the analyzer, shall be monitored hourly.

b. If the NOx monitor becomes nonoperational, additional process monitoring of the control device will be required. The temperature of the reaction chamber and ammonia flow will be recorded on an hourly basis until the hourly NOx monitoring is resumed.

5. Specific Record Keeping Requirements:

Records of the hourly and monthly calculated NO_x emissions rates shall be maintained at the source. Records of the start and end times of operation of the pickling operation and the associated scrubber shall be maintained.

6. Specific Reporting Requirements:

Reports of any exceedance of the emission limitations listed above shall be submitted to the Division as soon as possible per General Condition F8 of this permit.

7. Specific Control Equipment Operating Conditions:

a. The scrubber shall be operated at all times that the pickling unit is in operation.

b. The permittee shall monitor and record the following Scrubber operating parameters at least once per shift:
   1. Flow rate of the scrubbing liquor
   2. Temperature of reaction chamber

SECTION H - ALTERNATE OPERATING SCENARIOS (CONTINUED)

The alternative operating scenario is applicable to the modifications of the air pollution control equipment of Coil Pickling Lines. The requirements as presented below are applicable once the modification of the air pollution control device is completed at the respective source.

74 (S-74) – Long Products Pickling Line 1:
Description:
Acid pickling of steel long products using nitric and hydrofluoric acids with a maximum processing capacity of 75 tons of steel per hour and an annual average of 35 tons of steel input per hour. The acid pickling shall be equipped with a scrubber and SCR system for 98% control of nitrogen oxides, nitric acid, and hydrofluoric acid.
Construction commenced – March 15, 2002.

75 (S-75) - Long Products Pickling Line 2:
Description:
Acid pickling of steel long products using nitric and hydrofluoric acids with a maximum processing capacity of 75 tons of steel per hour and an annual average of 35 tons of steel input per hour. The acid pickling shall be equipped with a scrubber and SCR system for 98% control of nitrogen oxides, nitric acid, and hydrofluoric acid. Construction to commence – February, 2007.

APPLICABLE REGULATIONS
401 KAR 51:017 Prevention of significant deterioration of air quality.

1. Operating Limitations:
None

2. Emission Limitations:
a. Nitrogen oxide emissions shall not exceed 50 ppm, 4.81 lb/hr.
b. Nitrogen oxide emissions shall not exceed 21.05 tons per 12 month rolling total.

The following formulas will be used in calculating the NO_x emissions:
NO_x emissions rate (tons/day) = Average NO_2 concentration in exit stream (ppm by volume) x 1.1945E-7 (lbs/cu. ft./ppm by volume) x 1,200,000 (cu. ft./hr) x hours of operation (hrs/day) x 0.0005 (tons/lb)

Monthly NO_x emissions rate (tons/month) = Daily NO_x emissions rate (tons/day) x days of operation per month (hrs/month)

The NO_2 concentration is the daily average concentration measured in the exit gas stream as per the monitoring requirements listed below.

3. Testing Requirements:
The permittee shall test for NOx within sixty (60) days after achieving the maximum production rate at which the affected facilities will be operated but not later than 180 days after initial start-up of such facilities, the permittee shall conduct a performance demonstration on the affected facilities in accordance with 401 KAR 50:055, General compliance requirements. These performance tests must also be conducted in accordance with General Provisions G(d)7 of this permit.

SECTION H - ALTERNATE OPERATING SCENARIOS (CONTINUED)

NOx monitor shall be calibrated, operated, and maintained according to manufacturer's recommendations.

4. Specific Monitoring Requirements:

a. The concentration of NO_2 in the exit stream of the scrubber, as recorded by the analyzer, shall be monitored hourly.

b. If the NOx monitor becomes nonoperational, additional process monitoring of the control device will be required. The temperature of the reaction chamber and ammonia flow will be recorded on an hourly basis until the hourly NOx monitoring is resumed.

5. Specific Record Keeping Requirements:

Records of the hourly and monthly calculated NO_x emissions rates shall be maintained at the source. Records of the start and end times of operation of the pickling operation and the associated scrubber shall be maintained.

6. Specific Reporting Requirements:

Reports of any exceedance of the emission limitations listed above shall be submitted to the Division as soon as possible per General Condition F8 of this permit.

7. Specific Control Equipment Operating Conditions:

a. The scrubber shall be operated at all times that the pickling unit is in operation.

b. The permittee shall monitor and record the following Scrubber operating parameters at least once per shift:
   1. Flow rate of the scrubbing liquor
   2. Temperature of reaction chamber

SECTION I - COMPLIANCE SCHEDULE

Within 30 days of issuance of this permit, North American Stainless shall implement all monitoring and recordkeeping procedures for existing sources as contained in this permit.

Within 60 days of notification by the division, North American Stainless (NAS) shall submit modeling demonstrating compliance with the National Ambient Air Quality Standards (NAAQS) using allowables as stated in the permits of all affected facilities. Also, Prevention of significant deterioration of air quality (PSD) increments shall be modeled using actual emissions to demonstrate compliance with increment allowables. These modeled results are subject to division approval. NAS will take any necessary measures to reduce emission or increase dispersion to ensure compliance with the NAAQS and PSD increments.